DOCUMENT RESUME

ED 395 986 TM 025 149

AUTHOR	Deeter, Thomas; Prine, Don
TITLE	Assessment Program Results 1994-1995. Focus on Assessing Outcomes.
INSTITUTION	Des Moines Public Schools, Iowa.
PUB DATE	Oct 95
NOTE	63p.
PUB TYPE	Reports - Evaluative/Feasibility (142) -- Statistical Data (110)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Achievement Gains; *College Entrance Examinations; *Criterion Referenced Tests; Educational Assessment; Elementary Secondary Education; Ethnicity; *Performance Based Assessment; School Districts; Socioeconomic Status; *State Programs; Testing Programs; *Test Results; Urban Schools; Writing Tests
IDENTIFIERS	ACT Assessment; Advanced Placement Examinations (CEEB); *Des Moines Public Schools IA; *Iowa Tests of Basic Skills; Iowa Tests of Educational Development; Scholastic Assessment Tests

ABSTRACT

The Des Moines Public School System (Iowa) continually evaluates the process of teaching for learning. As part of this ongoing process, this report provides information to the Board of Directors and the public about the achievement of district students on the Iowa Tests of Basic Skills (ITBS), Iowa Tests of Educational Development (ITED), the American College Tests (ACT) and Scholastic Assessment Tests (SAT), the Advanced Placement Tests (AP) for college placement, the District Composition Assessment (performance based assessment for grades 3, 5, 8, and 11), and the school district's own criterion-referenced assessments. The aggregate of information from the multiple assessments in this report is an indication that district students are learning. In an urban context of diverse ethnic and socioeconomic factors, the Des Moines Public Schools continues to pursue a quality educational program. Standardized norm-referenced test scores are increasing in many schools. ACT, SAT, and AP results reflect district success in challenging students to reach higher levels of achievement. Student writing proficiency, measured by the composition test, also is increasing. Results for the criterion-referenced, objectives-based tests were mixed. At the elementary level, only in language arts did the percentages of students achieving the mastery standard fall, but at middle school levels, students lagged in mathematics, science, and foreign language, and at the high school level, students were not on target in family and consumer sciences and mathematics. Gaps based on ethnicity and socioeconomic indicators continue in the school system. Five appendixes present definitions and test results. (Contains 17 tables and 6 figures.) (SLD)

ED 395 986

95-307
AGENDA

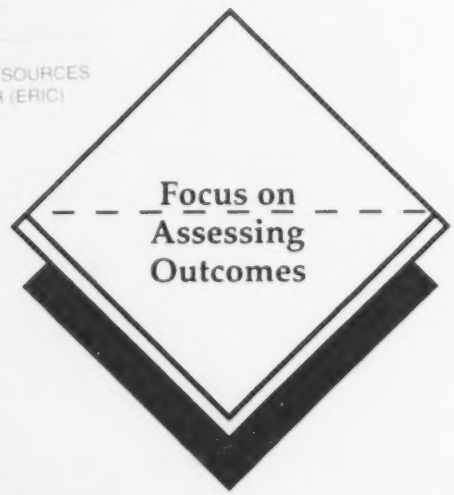
ASSESSMENT PROGRAM RESULTS 1994-1995

Des Moines Independent Community School District
1800 Grand Avenue
Des Moines, Iowa 50309

OCTOBER, 1995

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
THOMAS E. DEETER
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)



Dr. Thomas Deeter
Program Evaluator, Testing & Research

Dr. Don Prine
Director, School Improvement
& Employee Relations

TM025149

BEST COPY AVAILABLE

TABLE OF CONTENTS

District Mission Statement

Preface i

Program Overview 1
- Purpose 1
- Budget 2
- Procedures 2

1994-95 Assessment Results 3
- Standardized Testing 3
  - Utility of Standardized Assessment Information 3
  - The Iowa Tests of Basic Skills (ITBS) 3
  - Elementary School ITBS 4
  - Elementary School Cohort Growth 4
  - Middle School ITBS 5
  - Middle School Cohort Growth 6
  - Disaggregated ITBS Scores 7
  - The Iowa Tests of Educational Development (ITED) 8
  - Voluntary Saturday ITED 9
- American College Tests (ACT) 10
- Scholastic Achievement Tests (SAT) 11
- Advanced Placement Scholars 12
- District Composition Assessment 13
  - Classification Standards Comparison 14
- Criterion-Referenced Assessments 17
  - Special Illustration: Elementary Reading Cohort Growth 18
- District Improvement Plan Update: Objective 8 25
- Summary and Conclusions 27

Appendix A. Definitions 29
Appendix B. 1994-95 ITBS Tables 31
Appendix C. District Criterion-Referenced, Objectives-Based Tests: Historical Disaggregated Data 37
Appendix D. Pilot Test Results: Disaggregated Data 55
Appendix E. 1995-96 Test Development Plans 58

DISTRICT MISSION STATEMENT:

The Des Moines Independent Community School District will provide a quality educational program to a diverse community of students where all are expected to learn.

Preface

District-wide objective assessment of student progress is an essential part of any educational endeavor. Information relevant to how individual students and groups of students are progressing provides schools a basis to determine how successful their practices have been or how such practices should be designed to obtain even better results in the future.

Assessment results reflect student achievement on identified outcomes, and serve as an indication that a school is indeed achieving its mission. Many measures are used to assess student progress, including nationally standardized measures, district criterion-referenced or performance-based measures, or assessments used by individual teachers within their classrooms.

The value of any indicator system is based on the extent to which it captures the complexity of the teaching and learning process. Any single assessment cannot serve as *the* indicator of educational effectiveness. A multiple method, multiple index approach is recommended to paint a more clear and colorful picture of student achievement, to provide decision-makers with more information to refine the teaching-for-learning process. The use of qualitative representations of student achievement may also serve to validate quantitative measures.

Education is both a process and an outcome. The purposes for which assessment activities are conducted depend on the formative or summative nature of an evaluation. As long as stakeholders view education as a process *and* an outcome, assessment information can be used to make appropriate instructional decisions to enhance student learning and performance.

PROGRAM OVERVIEW

Purpose

The Des Moines Public Schools continue to focus organizational energy on the academic growth and development of its diverse urban student body. Purposes of the district's assessment program are to: 1) assess student learning, 2) diagnose instructional need, and 3) provide information for program evaluation.

Assessment results are indicators of student achievement on knowledge and performance outcomes. Used in isolation, any form of assessment provides only partial information about a child's academic development or a school district's overall curriculum. By obtaining results from multiple methods of assessment, decision-makers have more information to refine the teaching-for-learning process.

To personalize instructional decisions, continuous monitoring of student progress provides information for planning activities that will address the needs of each learner. Evaluation of student achievement information at the classroom, building, or district level allows identification of strengths as well as academic areas in need of improvement. In order to maintain an appropriate breadth of focus of the curriculum, student achievement trends in districts with similar characteristics can be monitored.

The Des Moines Public Schools, in its efforts to provide quality programming for its diverse student body, continually evaluates the process of teaching for learning. To identify areas for study and analysis, various methods of student outcome assessment are used. The purpose of this report is to provide information to the Board of Directors and to the public about the achievement of district students on the following:

- **Iowa Tests of Basic Skills (ITBS)**, a series of norm-referenced tests, given to students in third, fourth, sixth, and seventh grades. The tests are administered at midyear.

- **Iowa Tests of Educational Development (ITED)**, a series of norm-referenced tests, given to a sample of students in tenth grade. The tests are administered at midyear.

- The **American College Tests** and the **Scholastic Achievement Tests**, a series of norm-referenced tests, usually given to high school juniors and seniors for the purpose of determining probable success in higher education.

- **Advanced Placement Tests**, a series of criterion-referenced tests given to high school students seeking college credit prior to enrolling in college.

- **District Composition Assessment**, a performance-based assessment in which the *test* is the learning activity itself. It is administered in the fall to students in third, fifth, eighth, and eleventh grades.

- **Criterion-Referenced Assessments**, a series of curriculum-aligned, objectives-based tests, given in grades two through twelve and covering most subject matter areas in the Des Moines curriculum.

Disaggregation of assessment information is an integral component of planning for district growth. Groups for disaggregating data include gender, ethnicity (minority or non-minority status), and a socioeconomic variable. Disaggregation of data serves as an equity indicator in attempting to determine whether all students are learning and to what degree.

Budget

The operational budget for the assessment program, including salaries and estimated benefits, is approximately 0.12 percent of the district's operating budget. For every one hundred dollars that the district spends on operations, the assessment program receives 12 cents.

Procedures

Testing staff have automated many processes for efficiency of operations. Although it takes approximately two years to develop each criterion-referenced test, much of the text and graphics is provided by the Department of School Improvement. Standardized test forms have bar-coded labels to conserve classroom time. Scanable answer documents for criterion-referenced tests are pre-printed and pre-bubbled at Mid-Iowa Computer Center (MICC).

Since most district assessment activities are aligned with the curriculum, assessments can provide additional learning experiences for students to check their understanding of important concepts. Still, with consideration for the amount of time devoted to district assessment activities, students on the average spend less than one percent of their time in school taking district assessments.

MICC facilitates creating district datasets by aggregating results from each school and creating a manageable file to be downloaded and analyzed using a microcomputer statistical software package.

Test results are provided to stakeholders in various documents. Test graphs and up-to-date reports were provided to building principals in August for the previous year, to assist in planning activities. Data are also provided to buildings in school information bases. In the spring, a separate standardized test report, containing ITBS results, is provided to the Board.

1994-95 ASSESSMENT RESULTS

STANDARDIZED TESTING

Utility of Standardized Assessment Information

The primary use of standardized, norm-referenced assessment (ITBS, ITED) is to provide general information regarding how our district as a whole compares with other districts with similar characteristics. The Des Moines Public Schools use national school norms as the standard of comparison for ITBS and ITED, since the district's urban demographic characteristics are more reflective of a national reference group than a state reference group.

Standardized, norm-referenced assessment helps prevent a narrow focus on a few specific curriculum objectives from developing by selecting items that test a broad range of objectives from each subject area. These tests are not intended to perfectly match any district's curriculum. However, keeping in mind that the ITBS is an assessment of *basic* skills, it is a fair measure of student achievement in most areas. The ITED assesses a broad range of basic *and* higher order skills. With regard to individual scores, a student scoring at the 50th percentile is on grade level, and should be able to enter most schools across the nation and begin achieving success.

The Iowa Tests of Basic Skills (ITBS)

The Iowa Tests of Basic Skills is a standardized, norm-referenced test battery developed by the Iowa Testing Programs in Iowa City, Iowa. It is administered in February to district students in Grades 3, 4, 6, and 7. Scores are reported in percentiles, grade equivalents, and normal curve equivalents. Individual building results can be found in Appendix B.

For the 1995 administration, district students took the reading, language, and mathematics subtests. These subtests comprise the Core Total score. Similar to the old composite score, the Core Total does not include Social Studies, Science, or Sources of Information. The Sources of Information subtests, not administered in 1994, have been reviewed and judged to be appropriate and were administered. Social Studies was administered to third grade students who had completed the course by the February testing date.

The ITBS tests are designed so that each successive level of the test contains items from the upper half (approximately) of the previous level material. Considering the basic design of the ITBS (or any norm-referenced test), students performing at the 50th percentile are at the expected test and grade level average. For example, fourth grade students scoring at the 50th percentile in February also have a grade equivalent of approximately 4.5.

On tests administered at the same time of year on subsequent years, a student scoring at the 50th percentile in both years has experienced a year's growth. A

student scoring at the 50th percentile in 6th grade and at the 60th percentile in 7th grade might be said to have experienced accelerated achievement growth, over and above that which might be normally expected during that period of time.

Elementary School ITBS

Grade 3. Given a third grade student mobility rate ranging from 1 percent to 32 percent in the district's elementary schools and a socioeconomic variable ranging in one school where less than 5 percent of the students received free or reduced meals to greater than 90 percent in another, students recorded above average achievement. For this group of students, the district's national Core Total score on the ITBS was the 63rd percentile.

Of the district's 39 elementary centers, 25 (64%) scored at or above the 50th percentile. Seven of these elementary centers scored at or above the 80th percentile, and twelve others equaled or surpassed the 60th percentile point. Fourteen (36%) of the elementary centers scored below the 50th percentile, with eight sites scoring below the 40th percentile.

Grade 4. Given a fourth grade student mobility rate ranging from 3 percent to 32 percent in the district's elementary schools and a socioeconomic variable ranging in one school where less than 10 percent of the students received free or reduced meals to greater than 90 percent in another, students recorded above average achievement. For this group of students, the district's national Core Total score on the ITBS was the 63rd percentile.

Of the district's 39 elementary centers, 26 (67%) scored above the 50th percentile. Nine of these elementary centers scored at or above the 80th percentile, and ten others surpassed the 60th percentile point. Thirteen (33%) of the elementary centers scored below the 50th percentile, all scoring below the 40th percentile.

Elementary School Cohort Growth

Grade 3 (1993-94) to Grade 4 (1994-95). For the similar group of students, tested in the third grade in 1994 and in the fourth grade in 1995, the district's national composite score on the ITBS remained stable at the 63rd percentile. It should be noted that the group of fourth grade students in 1994-95 are different from the group of third grade students in 1993-94 to the extent that students move into or out of the district.

Of the district's 39 elementary centers, 20 (51%) recorded an increase in composite scores varying from 1 to 19 percentile points. Seven of these elementary centers improved by at least 10 percentile points, and eight others improved by at least 5 percentile points. Three elementary centers' scores remained unchanged, with two of these sites scoring above the 50th percentile. Scores at fifteen elementary centers (38%) dropped between 1 and 15 percentile points (Appendix B, Table B3).

An analysis of the ITBS subtests for the 1994-95 fourth graders compared to their 1993-94 third grade scores (Table 1) indicates improvement on Reading Total and Language Total scores, but a drop in Math Total scores. The largest increase was in Capitalization (13 percentile ranks), and the largest decrease was in Math Concepts (16 percentile ranks).

Table 1. Elementary School ITBS Subtest Score Comparisons:
Cohort Trend Percentile Ranks
National School Norms

	Grade 3 1993-94	Grade 4 1994-95
Vocabulary	51	43
Reading Comprehension	54	63
Reading Total	52	55
Spelling	43	52
Capitalization	62	75
Punctuation	65	71
Usage	66	62
Language Total	62	67
Math Concepts	73	57
Math Problem Solving	62	73
Math Total	69	66
Core Total	63	63
Maps & Diagrams	NA	71
Reference Materials	NA	59
Sources of Information Total	NA	66
Social Studies	NA	63

Middle School ITBS

Grade 6. Given a sixth grade student mobility rate ranging from 8 percent to 23 percent in the district's middle schools and a socioeconomic variable ranging in one school where less than 30 percent of the students received free or reduced meals to nearly 60 percent in another, students recorded slightly above average achievement. For this group of students, the district's national Core Total score on the ITBS was the 53rd percentile.

Of the district's 10 middle schools, 6 (60%) scored at or above the 50th percentile. Three schools surpassed the 60th percentile point. Four (40%) of the middle schools scored below the 50th percentile, with three sites scoring below the 40th percentile.

Grade 7. Given a seventh grade student mobility rate ranging from 5 percent to 21 percent in the district's middle schools and a socioeconomic variable ranging in one school where slightly more than 20 percent of the students received free or reduced meals to nearly 60 percent in another, students recorded above average achievement. For this group of students, the district's national Core Total score on the ITBS was the 62nd percentile.

Of the district's 10 middle schools, 7 (70%) scored at or above the 50th percentile. Six schools surpassed the 60th percentile point. Three (30%) of the middle schools scored below the 50th percentile, with one site scoring below the 40th percentile.

Middle School Cohort Growth

Grade 6 (1993-94) to Grade 7 (1994-95). For the similar group of students, tested in the sixth grade in 1994 and in the seventh grade in 1995, the district's national composite score on the ITBS increased from the 61st to the 62nd percentile.

Of the district's 10 middle schools, 5 (50%) recorded an increase in composite scores varying from 1 to 9 percentile points. Two of these middle schools improved by at least 8 percentile points. One middle school's score remained unchanged, well above the 50th percentile. Scores at four (40%) middle schools dropped between 1 (three sites) and 7 percentile points (Appendix B, Table B4).

An analysis of the ITBS subtests for the 1994-95 seventh graders compared to their 1993-94 sixth grade scores (Table 2) indicates improvement on Language Total scores, but a drop in Reading Total and Math Total scores. The largest increase was in Spelling (8 percentile ranks), and the largest decrease was in Math Concepts (9 percentile ranks).

Table 2. Middle School ITBS Subtest Score Comparisons:
Cohort Trend Percentile Ranks
National School Norms

	Grade 6 1993-94	Grade 7 1994-95
Vocabulary	49	46
Reading Comprehension	57	55
Reading Total	54	50
Spelling	54	62
Capitalization	63	68
Punctuation	59	65
Usage	56	57
Language Total	59	64
Math Concepts	68	59
Math Problem Solving	64	64
Math Total	66	62
Core Total	61	62
Maps & Diagrams	NA	68
Reference Materials	NA	55
Sources of Information Total	NA	63

Disaggregated ITBS Scores

Disaggregated ITBS data compares minority and non-minority Core Total scores (Table 3) by using median percentile scores. Of primary importance is to examine if the achievement *gap* between minority and non-minority students is closing and not widening. Trend data (Table 3) show that the gap (difference) for third graders in 1993-94 has closed for fourth graders (1994-95). However, the gap begins to widen again, however slightly, at Grade 7.

Table 3. Disaggregated ITBS Core Total Scores for Minority and Non-Minority Students Using Median Percentile Scores
National Student Norms
Trend Results

Grade Level	Minority	Difference	Non-Minority
Grade 3 1993-94	34	(28)	62
Grade 4 1994-95	39	(19)	58
Net Change	+5		-4
Grade 6 1993-94	36	(23)	59
Grade 7 1994-95	36	(24)	60
Net Change	0		+1

Another way to evaluate disaggregated assessment information is to examine the percent of students in a particular grade scoring at or above a specified standard. With the ITBS, differences between disaggregated groups regarding the number or percent of students scoring at or above grade level can be examined. Table 4 shows the percent of students scoring on grade level (50th percentile) or higher on the ITBS (Core Total). Overall, more than half of the students scored at or above grade level on the ITBS. Gender differences in achievement are minimal. There are substantial differences between non-minority and minority students, and between students receiving subsidized meals and those not receiving subsidized meals. Appendix B, Tables B5 and B6 show the percent of students scoring at or above grade level, by building.

Table 4. Percent of Students Scoring On Grade Level (50th Percentile) or Higher
Core Total Scores
National Student Norms
Trend Results

Grade	All Students	Males	Females	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Grade 3 1993-94	55.4	52.4	58.5	61.2	34.1	38.0	67.8
Grade 4 1994-95	55.3	53.4	57.3	60.4	36.7	37.9	68.0
Grade 6 1993-94	55.0	52.0	57.8	59.9	36.3	39.3	63.6
Grade 7 1994-95	56.0	52.2	59.4	61.5	36.0	39.7	65.2

The Iowa Tests of Educational Development (ITED)

The Iowa Tests of Educational Development is a standardized, norm-referenced test battery developed by the Iowa Testing Programs in Iowa City, Iowa. It is administered in February to a sample of district students in Grade 10. Scores are reported in percentiles.

The entire battery includes tests in the areas of vocabulary, content area reading, correctness and appropriateness of expression, quantitative thinking, interpretation of literary materials, analysis of social studies materials, analysis of science materials, and use of sources of information. Scores of 372 district 10th grade students who took the ITED in 1995 are shown in Table 5, with scores from the 1994 assessment.

Table 7. ITED Mean Percentile Scores by Subtest
National School Norms

Subtest	Average Percentile Score	
	1993-94	1994-95
Vocabulary	77	77
Content area Reading	78	83
Reading Total	75	80
Expression	75	81
Quantitative Thinking	85	88
Core Total	80	87
Literary Materials	71	73
Social Studies	82	83
Science	82	89
Sources of Information	81	80
Composite	84	86

Table 6 shows the percent of students scoring on grade level (50th percentile) or higher on the February 1995 administration of the ITED for each subtest. Overall, well above half of the students scored at or above grade level on the ITBS. Differences between disaggregated groups mirror ITBS trends.

These data should be interpreted with caution. Any sampling method is subject to error with regard to representativeness of the sample. To the extent that minority representation in the sample (19.5% in the 1995 assessment) does not reflect the district's tenth grade minority student population (approximately 23%), the gap between minority and non-minority students may be in err. This also applies to the gap between students based on participation in subsidized meal programs (18.5% in the 1995 assessment; approximately 25% district-wide for Grade 10).

Table 6. February 1995 ITED: Percent of Grade 10 Students Scoring On Grade Level (50th Percentile) or Higher National Student Norms

Strand	All Students	Males	Females	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Vocabulary	64.2	66.9	61.5	69.4	40.9	45.2	68.1
Content area Reading	69.2	63.9	74.4	74.5	45.0	53.6	72.3
Reading Total	66.6	64.5	68.7	71.3	45.0	48.2	70.3
Expression	71.8	64.6	78.9	74.8	57.8	51.7	75.7
Quantitative Thinking	77.6	79.8	75.4	81.4	59.7	64.9	80.0
Core Total	73.9	70.6	77.2	78.8	51.7	50.9	78.4
Literary Materials	66.5	62.1	70.9	70.2	49.2	57.4	68.3
Social Studies	71.1	70.5	71.7	74.5	55.0	49.1	75.4
Science	74.4	73.0	75.7	79.6	49.2	56.7	78.0
Sources of Information	68.6	70.6	66.7	73.7	46.2	49.1	72.4
Composite	71.5	69.0	74.1	76.4	50.0	51.9	75.4

Voluntary Saturday ITED

In order to provide an opportunity for students who wished to take the entire ITED battery, a special session is held on a Saturday during the year. On November 9, 1991, fourteen students took the ITED at Lincoln High School. Interested students included five from the 9th grade, four from the 10th grade, and five from the 11th grade. On February 13, 1993, at 1800 Grand, five students took the ITED. On February 12, 1994, at 1800 Grand, three students took the ITED. On February 11, 1995, at 1800 Grand, five students took the ITED. Although the number of students taking advantage of this opportunity is small, it is anticipated that we will continue offering it to those who wish to take the ITED.

AMERICAN COLLEGE TESTS (ACT)

The district's college-bound students maintained comparable scores in their mean performance on the ACT. Eight hundred fifty-nine students (57%) of the Class of 1995 took the ACT. The mean score for this group was 21.0 (out of 36), compared to 21.1 in 1994 and 20.8 in 1993. The national mean for this class was 20.8 and the Iowa mean was 21.8. Table 7 shows disaggregated ACT scores.

Table 7. ACT Composite Score Comparisons (Means)
Disaggregated by Ethnic Group

	Year	Number of Students	Des Moines	Iowa	National
All Students	1992	769	21.1	21.6	20.6
	1993	815	20.8	21.8	20.7
	1994	779	21.1	21.9	20.8
	1995	859	21.0	21.8	20.8
African American	1992	69	17.6	17.9	17.0
	1993	59	17.2	18.4	17.1
	1994	71	19.1	19.1	17.0
	1995	68	18.3	18.7	17.1
American Indian	1992	4	20.3	19.2	18.1
	1993	3	21.0	19.1	18.4
	1994	2	17.5	19.1	18.5
	1995	4	20.8	19.5	18.6
White	1992	592	21.8	21.8	21.3
	1993	629	21.5	21.9	21.4
	1994	569	21.8	22.0	21.4
	1995	611	21.6	21.9	21.5
Hispanic	1992	16	19.6	20.2	18.7
	1993	10	19.0	20.1	18.8
	1994	16	18.8	20.3	18.7
	1995	19	18.9	20.0	18.6
Asian	1992	52	19.3	21.1	21.6
	1993	60	17.1	21.3	21.7
	1994	59	18.1	21.1	21.7
	1995	78	18.7	21.2	21.6

SCHOLASTIC ACHIEVEMENT TESTS (SAT)

Typically, only those Des Moines students who are seeking entry into the most prestigious universities and colleges in the country take the SAT. District students continued to score well above the national average in their mean performance on the SAT.

In 1994-95, the SAT was taken by 137 students. For all students, the SAT-Verbal mean score was 511 out of 800, and the SAT-Math mean score was 585 out of 800. The Verbal mean score for males was 529 and for females was 499; the Math mean score for males was 629 and for females was 553. Table 8 compares Des Moines students' scores with national averages.

Table 8. SAT Composite Score Comparisons (Means)
Disaggregated by Gender

	Des Moines				National			
Year	1992 (n=128)	1993 (n=145)	1994 (n=124)	1995 (n=137)	1992	1993	1994	1995
SAT-Verbal								
All students	480	503	488	511	423	424	423	428
Males	489	518	500	529	428	428	425	429
Females	472	486	474	499	419	420	421	426
SAT-Math								
All students	555	577	547	585	476	478	479	482
Males	587	613	581	629	499	502	501	503
Females	526	537	508	553	456	457	460	463

ADVANCED PLACEMENT SCHOLARS

Advanced Placement (AP) tests are criterion-referenced, multiple-choice and free-response (essay or problem solving) tests given to high school students for college credit. The College Board recommends that a score of three or higher (out of five) be achieved in order to receive college credit for a specific course.

For 1994-95, 81 students representing all district high schools and one shared student (28E) from the Urbandale Community School District were recognized by The College Board as Advanced Placement Scholars. This is the largest number ever awarded to one district in the state of Iowa. For the fifth consecutive year, two district students were recognized by The College Board as the Top Male and Top Female AP Scholar in the State of Iowa.

- **A.P. Scholars**, with a minimum of three AP courses with test scores of 3 or higher, included 41 students.

- **A.P. Scholars with Honor**, with a minimum of four AP courses with test scores of 3 or higher and a 3.25 average, included 16 students.

- **A.P. Scholars with Distinction**, with a minimum of five AP courses with test scores of 3 or higher and an average of 3.5, included 24 students.

- **A.P. National Scholars**, with a minimum of eight AP courses with test scores of 3 or higher and an average of 4 or higher, included 8 students. Less than 900 students nationwide achieved this status last year. Until the 1994-95 school year, the state of Iowa only had a total of three National Scholars.

In addition, one of the district's students has been selected as one of seven students in the nation to be recognized by President Clinton for outstanding academic achievement.

Compilation of state comparison information on 1994-95 AP examinations should be available by December.

DISTRICT COMPOSITION ASSESSMENT

Performance-based assessments provide information regarding what a student can *do*, given a specific task. The district's performance-based assessment is a composition assessment, administered in the fall. Students in Grades 3, 5, 8, and 11 select one of three topics and then compose an essay on the selected topic. Essays are read by trained readers and scored holistically and on a number of dimensions that have been determined to be important components of writing skill. Since the assessment is aligned with the district's objectives for language arts, the student compositions are evaluated against established standards for each objective area. As such, the composition assessment might be viewed as objectives-based.

However, scores on this assessment might be considered to be more normative, such that a purely average paper (on a percent scale) should receive a raw score equivalent to a 50%, similar to a 50th percentile ranking on a standardized test. Since the process of judging and scoring compositions is fine-tuned (or re-calibrated) each year through ongoing training of readers, scores from year to year are not expected to significantly change. Table 9 shows the fall composite score mean percentages for all grades.

Table 9. District Composition Assessment
Composite Score Mean Percentages

Grade	1989	1990	1991	1992	1993	1994
3	60.7	61.9	62.3	60.3	64.9	64.9
5	69.6	69.1	68.9	67.3	66.8	68.8
8	64.5	64.2	65.1	66.2	66.8	65.5
11	68.3	68.8	69.0	70.4	70.7	69.9

Based on a Holistic score maximum of 10 points and a score of 8 points for each dimension, Table 10 lists the standard for each level.

Table 10. Composition Competency Standards

Standard	Holistic of	AND a Dimensional Mean of
Exemplary	9 or 10	7 or 8
Proficient	7 or 8	6 or greater
Competent	6	5 or greater
Developing	5 or less	less than 5

Disaggregated trend results of the 1994-95 composition assessment, along with results from previous years, are shown in Table 11. In general, the percentage of students achieving the "Competent" standard or higher increases over time. A greater percentage of females than males achieved the standard. A greater percentage of nonminority than minority students, and a greater percentage of

students not participating in the subsidized meal program than participants in the subsidized meal program achieved the standard. Over time, the gap between males and females increased slightly. The gap between nonminority and minority students increased significantly, and the gap between students based on participation in subsidized meal programs increased slightly.

Table 11. District Composition Assessment Trends:
Percent of Students Achieving the "Competent" Standard or Higher

Grade & Year	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Grade 3 1991-92	36.5*	42.8	30.6	38.8	26.8	25.3	44.2
	2336**	1125	1211	1899	437	945	1388
Grade 5 1993-94	34.9	41.4	28.6	39.5	16.0	18.3	46.6
	2143	1059	1084	1724	419	886	1257
Grade 3 1992-93	30.9	36.8	25.1	33.8	19.2	19.6	39.6
	2305	1150	1155	1847	458	997	1308
Grade 5 1994-95	37.8	44.0	31.5	41.0	26.4	25.4	46.2
	2062	1038	1024	1619	443	827	1235
Grade 5 1991-92	34.9	39.2	30.5	37.1	25.1	22.4	42.3
	2147	1078	1069	1756	391	802	1344
Grade 8 1994-95	43.0	47.6	38.4	46.5	29.4	28.6	49.6
	1846	927	919	1472	374	581	1265
Grade 8 1991-92	35.7	40.2	31.1	37.9	24.7	22.9	40.7
	1868	935	933	1548	320	528	1339
Grade 11 1994-95	58.6	65.2	51.8	62.6	41.6	41.9	61.6
	1416	721	695	1147	269	215	1201

* Percent of students achieving the "Competent" standard.
** Number of students tested.

Classification Standards Comparison

Composite scores from the original raw data were analyzed to determine the number and percent of students being classified into one of the four groups according the criteria for the standards. Tables 12 through 15 show the trends in numbers of students tested and percent of students achieving the various classifications since 1991. Although the percentages in the Proficient or Exemplary categories are not large, they are increasing over time. While it seems difficult to surpass these higher standards (this ceiling effect is largely a function of the manner in which the assessments are scored), it is noteworthy that in general, the percentage of students in the Developing category continues to decrease over time.

Table 12. District Composition Assessment Proficiency Trends: Grade 3 (1991-92) to Grade 5 (1993-94)

LEVEL	Number of students in Grade 3	Number of students in Grade 5	Percent of students in Grade 3	Percent of students in Grade 5
Exemplary 1991-1992	7		0.3	
Exemplary 1993-1994		20		0.9
Proficient 1991-1992	73		3.1	
Proficient 1993-1994		84		3.8
Competent 1991-1992	782		33.0	
Competent 1993-1994		659		29.8
Developing 1991-1992	1508		63.6	
Developing 1993-1994		1445		65.4

Table 13. District Composition Assessment Proficiency Trends: Grade 3 (1992-93) to Grade 5 (1994-95)

LEVEL	Number of students in Grade 3	Number of students in Grade 5	Percent of students in Grade 3	Percent of students in Grade 5
Exemplary 1992-1993	5		0.2	
Exemplary 1994-1995		18		0.9
Proficient 1992-1993	75		3.2	
Proficient 1994-1995		175		8.3
Competent 1992-1993	646		27.5	
Competent 1994-1995		602		28.6
Developing 1992-1993	1627		69.1	
Developing 1994-1995		1307		62.2

Criteria for Ratings:
Exemplary: Holistic of 9 or 10 and dimensional mean of 7.
Proficient: Holistic of 7 or 8 and dimensional mean of 6.
Competent: Holistic of 6 and dimensional mean of 5.
Developing: Holistic of less than 6 or dimensional mean less than 5.

Table 14. District Composition Assessment Proficiency Trends: Grade 5 (1991-92) to Grade 8 (1994-95)

LEVEL	Number of students in Grade 5	Number of students in Grade 8	Percent of students in Grade 5	Percent of students in Grade 8
Exemplary 1991-1992	17		0.8	
Exemplary 1994-1995		17		0.9
Proficient 1991-1992	72		3.3	
Proficient 1994-1995		234		12.4
Competent 1991-1992	666		30.6	
Competent 1994-1995		561		29.7
Developing 1991-1992	1421		65.3	
Developing 1994-1995		1075		57.0

Table 15. District Composition Assessment Proficiency Trends: Grade 8 (1991-92) to Grade 11 (1994-95)

LEVEL	Number of students in Grade 8	Number of students in Grade 11	Percent of students in Grade 8	Percent of students in Grade 11
Exemplary 1991-1992	20		1.0	
Exemplary 1994-1995		50		3.5
Proficient 1991-1992	93		4.9	
Proficient 1994-1995		304		21.0
Competent 1991-1992	559		29.3	
Competent 1994-1995		490		33.9
Developing 1991-1992	1233		64.7	
Developing 1994-1995		603		41.7

Criteria for Ratings:
Exemplary: Holistic of 9 or 10 and dimensional mean of 7.
Proficient: Holistic of 7 or 8 and dimensional mean of 6.
Competent: Holistic of 6 and dimensional mean of 5.
Developing: Holistic of less than 6 or dimensional mean less than 5.

CRITERION-REFERENCED ASSESSMENTS

The criterion-referenced assessment program covers a wide array of subject matter across curriculum areas and grade levels. The primary intent of these instruments is to determine the extent to which the curriculum being taught is learned. District criterion-referenced tests are not timed, thereby allowing students reasonable time to complete all items. Each test contains a specified number of strands (groups of items measuring the same concept), and is designed to evaluate student mastery of the objectives of a given subject matter. They are also designed to diagnose student learning or identify deficiencies in a student's reasoning process. Because the objectives-based tests are aligned with the adopted district curriculum, scores are more reflective of a student's achievements in a specific curricular area. Therefore, the district's criterion-referenced tests provide a more accurate picture of what is taught and learned than standardized, norm-referenced tests.

The primary purposes of the criterion-referenced assessment program are to evaluate the curriculum and to assist in instructional planning. At the elementary school level, data from these assessments are also used to: 1) supplement the student achievement data gathered through the site use of an instructional management system (or other documentation software) and through individual teacher assessments, and 2) monitor student achievement in curriculum areas not utilizing an instructional management system. At the middle and high school level, data are also used for individual student evaluation (as a part of assigning course grades to students).

The disaggregated mastery data can be evaluated in two ways. First, data can be analyzed to see how similar groups of students perform on a test of the same curriculum area in subsequent years (i.e., evaluating *cohort* data). For example, results of student assessment in Grade 3 mathematics in one year can be generally compared to results of student assessment in Grade 4 mathematics the next year, and Grade 5 mathematics the next year. Second, data on a particular test can be evaluated over a period of time, to examine if gaps (detected by disaggregation) on one administration of a test tend to close with future administrations of the same test. For example, results of student assessment on a Grade 10 English test can be compared and evaluated for achievement trends for students over a three year period. The results of this type of analysis (i.e., evaluating *historical* data) should be interpreted with caution, since the groups of students taking the same test each year are different.

Cohort analysis is used to examine the growth of similar groups of students over time. Figures 1 through 4 are examples of the results of cohort growth analyses for selected subject areas. The data are analyzed for all students assessed and are disaggregated by gender, ethnicity, and a socioeconomic indicator. The table accompanying each figure shows the percent of students in a particular group scoring at or above the district's 70% standard, as well as the number of students assessed in each group.

Cohort data are most available at the elementary level, since groups of students tend to matriculate through the grades together. This type of data is less representative of all students at the middle school level (i.e., Grade 8, when students begin to specialize in certain areas such as mathematics), and is not available at the high school level, since there is little continuity of student course selection among discrete courses. Because of this, the examination of historical data for long-term trends in student achievement can provide information for program evaluation. Appendix C contains the results of the historical data analyses for all criterion-referenced, objectives-based tests administered during 1994-95. Appendix D contains the results for all pilot tests administered during 1994-95.

Special Illustration: Elementary Reading Cohort Growth

The Silver-Burdett-Ginn developmental reading curriculum adopted by the district consists of three levels of basal texts at Grade 1, two levels at Grades 2 and 3, and one level each for Grades 4 through 8. Because students in each grade tend to progress at very different rates, they may be reading at a developmental level that is below their actual grade level text. Because of the potential inclusion of upper grade students in *off-level* reading groups, the analysis of both historical and cohort data becomes more difficult.

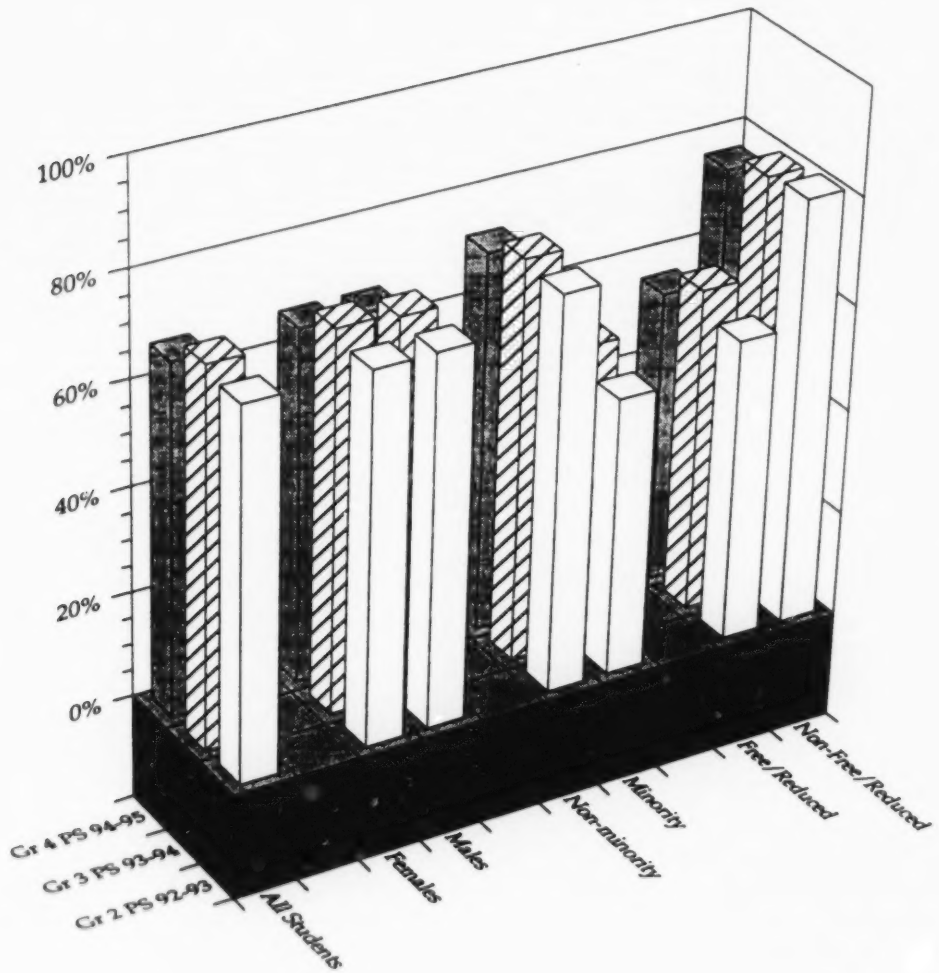
In order to appropriately evaluate student growth, two issues must be addressed. First, the number of students who are reading (and assessed) at the appropriate end-of-level text for their grade must be examined. Second, the percent of students mastering the end-of-level assessment for their grade must be examined.

Figure 5 shows the number and percent of students at each elementary grade assessed with the appropriate end-of-level test for that grade. In general, more students are reading at their appropriate end-of-level text in 1995 than in previous years.

Figure 6 shows the percent of students at each elementary grade that achieved the 70% mastery standard on the appropriate end-of-level test for that grade. In general, a greater percentage of students are demonstrating mastery of appropriate end-of-level tests.

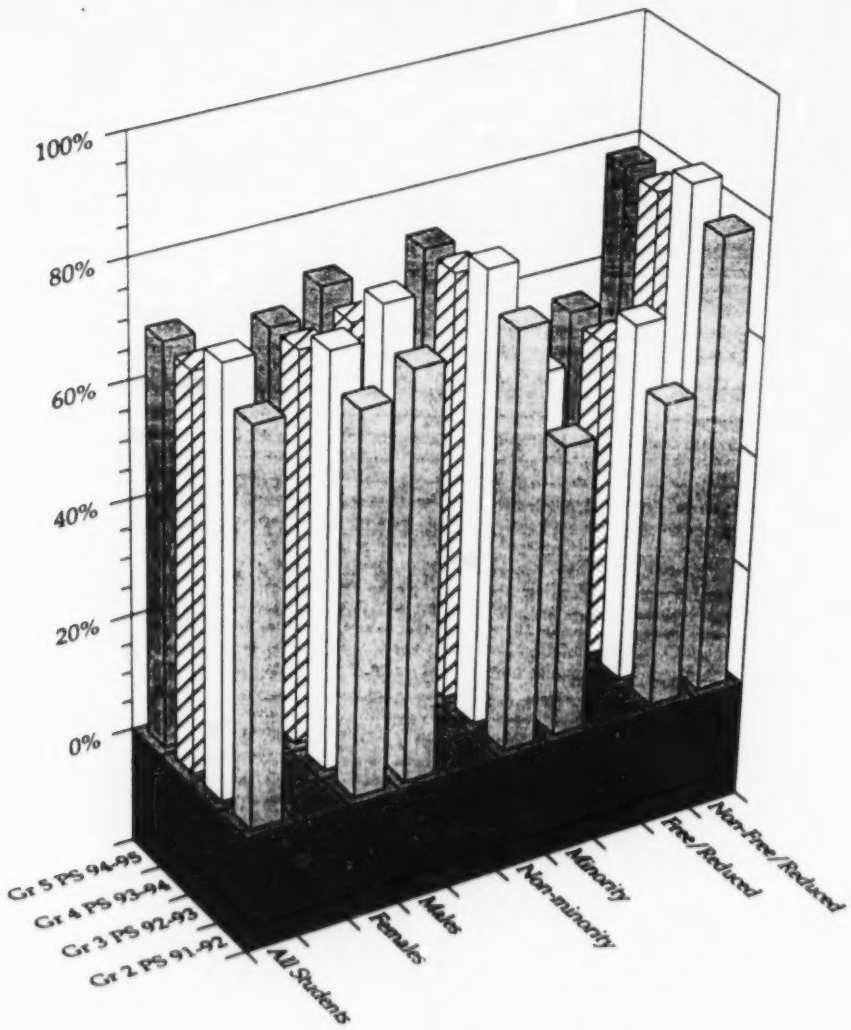
The arrows in Figure 6 represent *cohort* growth. Evidence for effectiveness of the developmental reading program at the elementary level is reflected in: 1) the increasing percent of students completing the appropriate end-of-level text, and 2) the increasing percent of students mastering the appropriate end-of-level test.

Figure 1. Elementary Math Problem Solving:
Cohort of Grade 4 Students in 1994-95



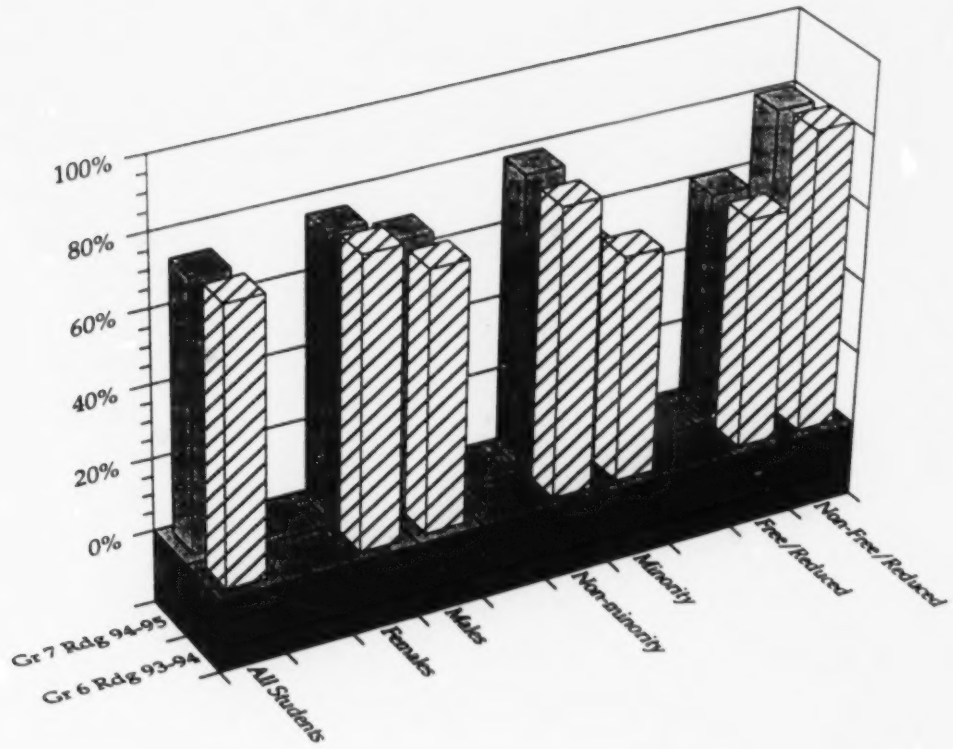
Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
Math 2 Problem Solving	70.3	70.3	70.4	75.0	52.7	57.4	80.8	% ≥ 70%
1992-1993	2513	1217	1296	1989	524	1130	1383	N Tested
Math 3 Problem Solving	71.8	72.3	71.4	76.0	56.9	61.6	79.9	% ≥ 70%
1993-1994	2362	1143	1219	1844	518	1041	1321	N Tested
Math 4 Problem Solving	66.8	66.8	66.8	71.9	49.9	55.6	76.1	% ≥ 70%
1994-1995	2229	1092	1137	1714	515	1014	1215	N Tested

Figure 2. Elementary Math Problem Solving:
Cohort of Grade 5 Students in 1994-95



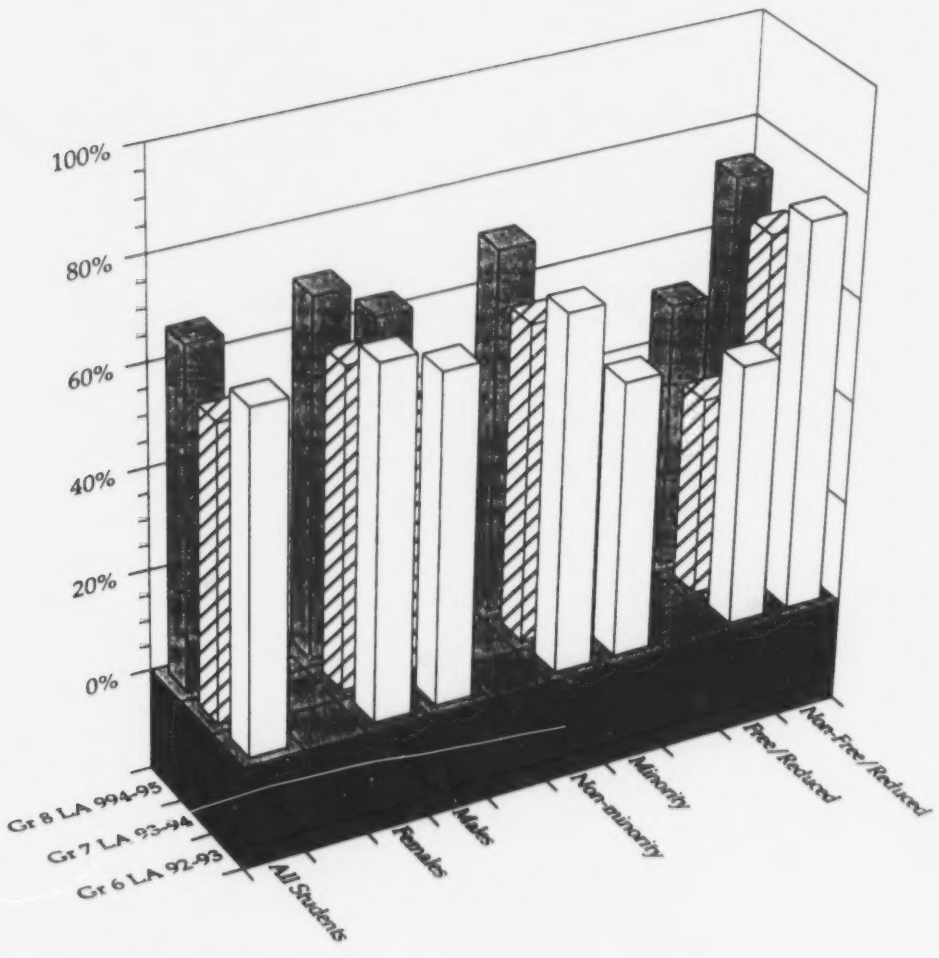
Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
Math 2 Problem Solving	67.8	65.6	69.9	71.8	50	52.4	78.1	% ≥ 70%
1991-1992	2377	1179	1198	1941	436	954	1422	N Tested
Math 3 Problem Solving	73.7	71.1	76.4	77.6	58.0	61.7	83.0	% ≥ 70%
1992-1993	2316	1147	1169	1856	460	1005	1311	N Tested
Math 4 Problem Solving	68.3	67.2	69.4	73.1	49.3	54.9	77.8	% ≥ 70%
1993-1994	2180	1093	1087	1742	438	902	1278	N Tested
Math 5 Problem Solving	69.1	66.9	71.4	73.2	54.0	56.0	78.4	% ≥ 70%
1994-1995	2089	1047	1042	1641	448	866	1223	N Tested

Figure 3. Middle School Reading:
Cohort of Grade 7 Students in 1994-95



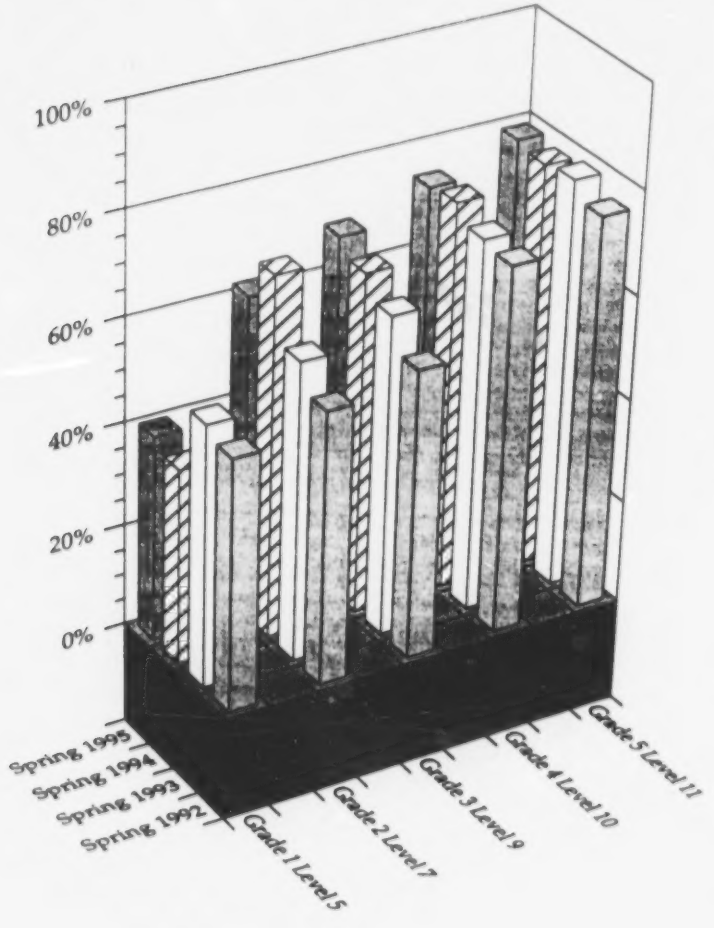
Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
Wind by the Sea Level 12	75.6	79.5	71.4	79.0	61.5	63.0	83.0	% ≥ 70%
1993-1994	1964	1014	950	1574	390	732	1232	N Tested
Star Walk Level 13	73.8	76.9	70.3	79.5	53.1	61.7	81.0	% ≥ 70%
1994-1995	1839	978	861	1442	397	686	1153	N Tested

Figure 4. Middle School Language Arts:
Cohort of Grade 8 Students in 1994-95



Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
Language Arts Grade 6	66.9	69.2	64.6	69.7	53.8	51.1	75.9	% ≥ 70%
1992-1993	2006	1016	990	1662	344	724	1282	N Tested
Language Arts Grade 7	58.3	63.0	53.6	62.1	41.8	38.8	68.1	% ≥ 70%
1993-1994	1881	940	941	1529	352	632	1249	N Tested
Language Arts Grade 8	67.1	70.4	63.7	70.7	52.1	51.7	73.9	% ≥ 70%
1994-1995	1743	876	867	1403	340	538	1205	N Tested

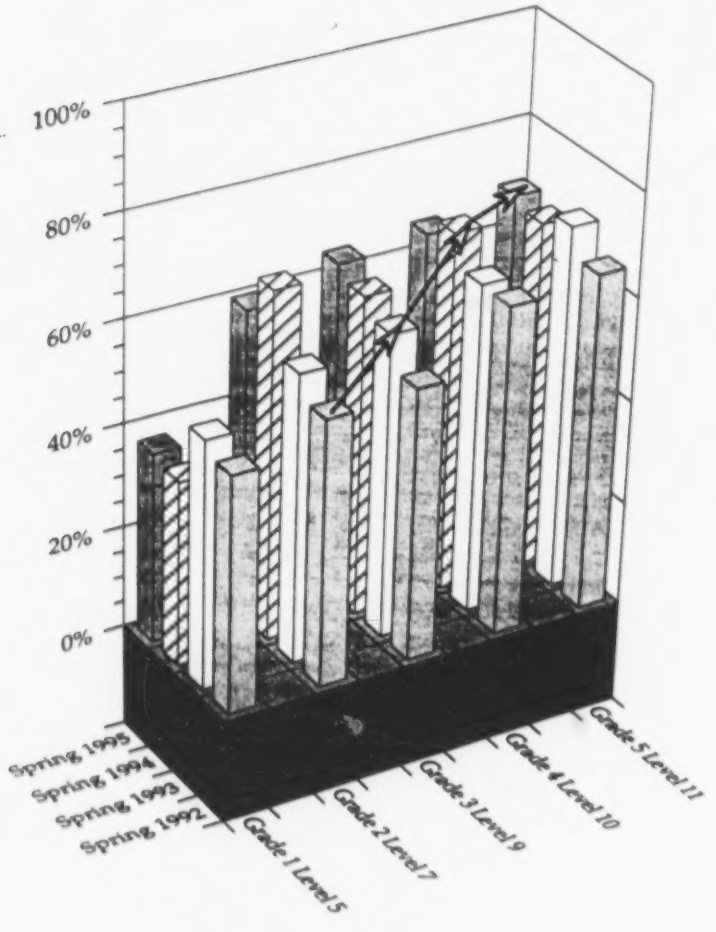
Figure 5. Elementary Reading: Students Assessed
On Grade Level: Grade 1 to Grade 5.



Year	Grade 1 Level 5	Grade 2 Level 7	Grade 3 Level 9	Grade 4 Level 10	Grade 5 Level 11	
Spring 1992	49%	53%	56%	71%	76%	Pct. of Students
	1038	1269	1306	1445	1496	Num. Students
Spring 1993	51%	58%	62%	72%	79%	Pct. of Students
	1144	1354	1335	1541	1617	Num. Students
Spring 1994	38%	70%	66%	75%	78%	Pct. of Students
	976	1415	1337	1505	1539	Num. Students
Spring 1995	40%	62%	69%	74%	79%	Pct. of Students
	1029	1109	1424	1478	1471	Num. Students

* Estimate based on official student enrollment for Grade 1.

Figure 6. Elementary Reading: Student Mastery
On Grade Level: Grade 1 to Grade 5.



Year	Grade 1 Level 5	Grade 2 Level 7	Grade 3 Level 9	Grade 4 Level 10	Grade 5 Level 11	
Spring 1992	46.2%	51.8%	52.8%	63.7%	65.3%	Pct. Mastery
	1038	1269	1306	1445	1496	Num. Assessed
Spring 1993	49.4%	57.8%	60.6%	65.1%	70.7%	Pct. Mastery
	1144	1354	1335	1541	1617	Num. Assessed
Spring 1994	36.1%*	67.5%	62.0%	69.6%	67.1%	Pct. Mastery
	976	1415	1337	1505	1539	Num. Assessed
Spring 1995	37.0%*	59.8%	64.2%	65.5%	68.6%	Pct. Mastery
	1029	1109	1424	1478	1471	Num. Assessed

* Estimate based on official student enrollment for Grade 1.

DISTRICT IMPROVEMENT PLAN UPDATE: OBJECTIVE 8

Objective 8 of the 1995 District Improvement Plan states: "By the beginning of the 1999-2000 school year, 80% of elementary, middle and high school students will achieve at least 70% mastery on district criterion-referenced assessments of mathematics, reading, language arts, social sciences, sciences, foreign languages, and vocational subjects."

For the 1994-95 school year, the targets for student achievement were (Table 16):

- Elementary: 68% of the students will achieve the 70% standard.
- Middle: 56% of the students will achieve the 70% standard.
- High: 50% of the students will achieve the 70% standard.

Table 16. Target and Actual Percent of Students Achieving the District Mastery Standard

Year	Elementary (70%)		Middle (70%)		High (70%)	
	Target	Actual	Target	Actual	Target	Actual
1992-93	65	77	47	48	40	34
1993-94	65	79	50	53	40	46
1994-95	68	76	56	56	50	52
1995-96	71		62		60	
1996-97	74		68		70	
1997-98	77		74		75	
1998-99	80		80		80	

Note: Results are for all students and all areas combined.

The 1993-94 District Improvement Plan - Objective 8 addressed a number of issues regarding the viability of student assessment information. For the criterion-referenced tests, a district standard of 70% mastery on the tests was established and the percent of students achieving that mastery level was to serve as one indicator of program success at the district (or building) level.

Data are disaggregated by ethnicity (minority vs. non-minority status), gender (female vs. male), and socioeconomic status (students on free or reduced priced meals vs. students not on free or reduced priced meals). The results, broken down for each building, have been presented annually to all principals since the 1991-92 school year. District and building-specific data continue to be provided in each school's information base.

The results for all students and all areas combined represent a duplicated count, such that it is possible for all test scores for a single student to be included in the average. While it is possible that including all scores from a high achieving student may inflate an average, all scores from a low achieving student may deflate an average. Results for individual curriculum areas are more interpretable, since it is less likely that a single student would take more than a single course in a given area.

Summarizing 1994-95 (Table 17): At the elementary level, greater than 68% of the students achieved the 70% standard in math, reading, and science. Less than 68% of the students achieved the 70% standard in language arts (a single test). For all tests and students, 75.6 percent of all scores were above the 70% standard, which surpasses the standard in the 1995 District Improvement Plan.

At the middle school level, greater than 56% of the students achieved the 70% standard in language arts and reading (and a single course in social science); less than 56% of the students achieved the 70% standard in science, math, and foreign language. For all tests and students, 56 percent of all scores were above the 70% standard, which is on target with the standard in the 1995 District Improvement Plan.

At the high school level, greater than 50% of the students achieved the 70% standard in English, social science, and foreign language; less than 50% of the students achieved the 70% standard in science (one course), math, and family and consumer science. For all tests and students, 52.2 percent of all scores were above the 70% standard, which surpasses the standard in the 1995 District Improvement Plan.

Table 17. Percent of Students Achieving the District Mastery Standard by Curriculum Area

	1992-93 Curr. Area Percentages	1992-93 All Students & Areas	1993-94 Curr. Area Percentages	1993-94 All Students & Areas	1994-95 Curr. Area Percentages	1994-95 All Students & Areas
Elementary		76.5		79.04		75.6
Math	72.7		70.2		70.3	
Reading	88.0		88.0		86.8	
Language Arts	47.4		-		57.2*	
Science	68.2		-		73.3	
Middle		48.3		52.72		56.0
Language Arts	60.8		61.9		65.7	
Reading	70.4		71.6		71.2	
Science	35.1		36.8		37.2	
Social Science	34.7		36.9		86.0*	
Math	35.7		54.4		48.9	
Foreign Language	-		46.5		47.9	
High		34.2		45.97		52.2
English	68.7		70.3		72.8	
Fam. & Cons. Sci.	43.7		42.7		48.7	
Math	42.1		40.5		33.0	
Science	22.3		22.6		17.4*	
Social Science	23.7		47.4		53.6	
Foreign Language	-		52.0		57.5	

*Calculations were based on a single course.

SUMMARY AND CONCLUSIONS

The aggregate of information from the multiple assessments in this report is an indication that district students are learning. Within an urban context of diverse ethnic and socioeconomic factors, the Des Moines Public Schools continues to pursue the provision of a quality educational program where all students are expected to learn.

Standardized, norm-referenced test scores are increasing in many schools, which is one indicator that students are experiencing accelerated learning. For students who have aspirations of post-secondary education, ACT, SAT, and AP results reflect the districts success at challenging students to reach higher levels of achievement.

Student writing proficiency is increasing. At earlier ages, students have not yet had many opportunities to practice writing, or to manage one's thought processes. As students matriculate through the system, they are learning and demonstrating the skills of written description, narration, and persuasive communication. It is important to note that the composition assessment is given in the fall. As such, Grade 11 students have nearly two more years to continue improving their writing skills.

Results of the criterion-referenced, objectives-based tests were mixed. The percentages of elementary students achieving the mastery standard are on target for math, reading, and science, but fall behind in language arts. At the middle school level, the percentages are on target for language arts and reading, but fall behind on foreign language, math, and science. At the high school level, the percentages are on target for English, foreign language, and social science, but fall behind on family and consumer sciences and math.

As new tests are developed, district staff are examining the possibilities of more frequent assessment of students. Not only would this relieve the burden on teachers and students of a comprehensive examination at the end of a course, but it would also allow students to respond to more items that cover a limited subset of objectives, providing a better opportunity to demonstrate subject matter mastery. In addition, it would provide immediate feedback for teachers and students, so that additional learning activities can be provided to remediate deficiencies.

For example, science 3, 4, and 5 each contain three independent instructional modules that teachers administer at the conclusion of instruction. This "modular testing" system provides maximum freedom for each teacher to plan instruction and assessment when it is most appropriate for students. Modular tests have also been piloted for biology (8 modules), physics (5 modules), and chemistry (6 modules). Modular tests also will be developed for middle school science. The possibility of developing a semester test as well as a comprehensive final for geometry is being examined. This would be the first mathematics course to have more than a single end-of-year district test.

An issue related to all of the assessment methods is the achievement gap between disaggregated groups, with regard to the percent of students achieving the district standard. Gender differences, for the most part, are small. For 95 criterion referenced tests administered (including pilot tests) and four additional tests from the composition assessment, the gender gap was greater than ten percentage points for 19 tests. Nine of the tests favored females, and ten of the tests favored males.

On the other hand, the gaps based on ethnicity and a socioeconomic indicator are more substantial. Only on four of the tests did a greater percentage of minority students than nonminority students achieve the district standard. Nonminority achievement outpaced minority achievement by ten percentage points or more on 79 tests, and by 20 percentage points or more on 29 tests. Students in the subsidized meal program outpaced those not in the subsidized meal program on one test. The percentage of affluent students outpaced that of nonaffluent students by at least ten percentage points on 68 tests, and by at least 20 points on 30 tests.

Focusing on student achievement gaps at the individual school level might resolve some issues at a specific site. However, it seems that it will take an effort focused at the district level to reduce these gaps significantly.

The complex nature of teaching-for-learning requires appropriate information for instructional planning and decision-making. While it seems that most of the students in the Des Moines Public Schools are indeed achieving, it is apparent that some are not. In order to develop a more systemic focus on improvement, it is important for schools to be able to network more effectively, to be able to communicate about what works and what does not. Through cooperative efforts, the school district and the community will continue to provide opportunities for all students to achieve.

Appendix A

DEFINITIONS

Criterion-Referenced Test - a test that has been assigned a criterion score or percent that is in the definition of mastery or success. If a standard of achievement is not specified, these are often referred to as objectives-based tests.

Grade Equivalent - the grade level for which a score is the real or estimated average. For example, 4.2 represents the fourth year, second month.

Iowa Tests of Basic Skills (ITBS) - a norm-referenced test published by the Iowa Testing Programs in Iowa City, Iowa. It is administered in Grades 3, 4, 6, and 7 in the Des Moines Public Schools. The test consists of the following parts:

> Grades 3, 4, 6, & 7: Vocabulary, reading spelling, capitalization, punctuation, usage, visual material, references, math concepts, math problems, and math computation.

ITBS scores are reported in percentiles, grade equivalents, and normal curve equivalents.

Iowa Tests of Educational Development (ITED) - a norm-referenced test published by the Iowa Testing Programs in Iowa City, Iowa. It is administered in Grade 10 in the Des Moines Public Schools. The test consists of the following parts:

> Correctness of Expression, Quantitative Expression, Social Studies, Natural Sciences, Literary Materials, Vocabulary, and Sources of Information.

ITED scores are reported in percentiles.

Mastery Metric - a pre-specified standard that students must achieve in order to demonstrate competence of the subject matter. This mastery standard does not compare students with each other, but with an external standard defined by the objectives of a course and the requirements for demonstrating competence. Thus, all students have an opportunity to demonstrate mastery of subject matter.

Normal Curve Equivalent - an interval scale equivalent of the bell-shaped curve. The conversion process to arrive at an NCE distribution transforms the shape of the bell-shaped curve into a rectangular shape, such that the scores are distributed equally across each point in the distribution.

Norm-Referenced Test - a test that interprets individual performance by comparing a student's score to a previously established norm group, not to a performance criterion. The test is designed for one-half of the students to be above the 50th percentile and one-half below.

Objectives-Based Test - a test designed to measure one or more instructional objectives, usually the critical skills being taught by an educational program.

Percent - the proportion of a total. In testing, it is the number of questions answered correctly divided by the total number of items on the test.

Percentile - a point in the distribution below which a certain percent of the scores fall. For example, the 80th percentile is the point below which 80 percent of the scores lie. The shape of the distribution of percentiles is a bell-shaped curve.

Performance-based Assessment - an assessment in which the task is the skill that students are asked to perform, such as the demonstration of writing proficiency.

BEST COPY AVAILABLE

School Norms - Show where a school building or school system average for each grade group ranks among other averages of similar grade groups. It indicates specifically where the average score ranks among the averages of other schools (Iowa Testing Programs).

Significance - an association between two variables or among a group of variables is said to be statistically significant when [quantitatively] the association fulfills specific predetermined criteria. Statistical significance is largely a function of sample size, and must be weighed against a "meaningfulness" criterion. In addition to or in the absence of statistical significance, results judged as having educational or practical meaning may play an important role in the evaluation of outcomes, and in some cases, may be more valid than statistical significance.

Student Norms - Show where the average student ranks among other students in the same grade. It should be interpreted as the rank of the average student among the students (Iowa Testing Programs).

Note on Mobility Rate and Free/Reduced price meals:
Data on student mobility and qualification for free or reduced price meals (used for analysis of ITBS data) were taken from the student data files at Mid-Iowa Computer Center as of the Friday before testing began. Since this information is available for each student, these indices were computed for each grade level within each building.

Mobility rate for each grade within each building was determined by the following formula:

$$\frac{\text{(Number of entries + Number of exits)}}{\text{Average daily membership}} \times 100$$

Average daily membership was computed by taking the official student enrollment "as of" the official count date (the third Friday in September), adding all of the entries after the official count date, and subtracting all of the exits after the official count date. Number of entries and exits were counted after the official count date.

Percent of students on free or reduced price meals was determined by combining the number of students on free and on reduced, and dividing by the average daily membership for that grade.

The data for students receiving free or reduced price meals for the criterion-referenced tests were taken from student data files at MICC on the date that the files were created (during June, 1994).

Appendix B

Table B1. ITBS Historical Results
Grade 3 & Grade 4 Percentile Ranks
National School Norms

SCHOOL	Grade 3 1993-94 Core Total	Grade 3 1994-95 Core Total	Grade 4 1993-94 Core Total	Grade 4 1994-95 Core Total
Adams	67	47	49	52
Brooks	16	14	42	16
Cattell	68	57	57	57
Douglas	64	67	74	69
Edmunds	28	49	30	35
Findley	70	54	83	74
Garton	40	49	51	35
Granger	76	76	71	67
Greenwood	97	94	96	97
Hanawalt	97	97	97	99
Hillis	74	84	84	74
Howe	38	75	74	56
Hubbell	84	79	83	94
Jackson	64	50	77	75
Jefferson	93	97	97	94
Longfellow	14	21	31	24
Lovejoy	66	63	55	71
Lucas	18	10	20	23
Madison	46	62	71	39
Mann	NA	41	57	54
Mc Kee	42	19	43	35
Mc Kinley	12	20	24	25
Mitchell	52	41	63	54
Monroe	95	83	86	83
Moore	85	71	85	83
Moulton	15	26	44	20
Oak Park	48	58	49	36
Park Avenue	63	59	51	67
Perkins	66	74	74	65
Phillips	68	76	49	80
Pleasant Hill	83	85	82	77
Stowe	52	50	59	59
Studebaker	68	66	71	59
Wallace	25	18	43	18
Watrous	44	92	70	34
Willard	42	19	40	29
Windsor	77	66	91	84
Woodlawn	63	70	76	82
Wright	60	42	66	68
DISTRICT	63	63	68	63

Table B2. ITBS Historical Results
Grade 6 & Grade 7 Percentile Ranks
National School Norms

SCHOOL	Grade 6 1993-94 Core Total	Grade 6 1994-95 Core Total	Grade 7 1993-94 Core Total	Grade 7 1994-95 Core Total
Brody	68	66	70	68
Callanan	80	79	77	79
Goodrell	50	53	47	52
Harding	36	26	40	44
Hiatt	46	27	37	39
Hoyt	40	34	53	44
McCombs	54	51	62	63
Meredith	61	56	73	60
Merrill	77	74	81	78
Weeks	70	47	74	69
DISTRICT	61	53	64	62

Table B3. ITBS Percentile Rank Trends
Grade 3 (1993-94) To Grade 4 (1994-95)
National School Norms

SCHOOL	Grade 3 1993-94 Core Total	Grade 4 1994-95 Core Total	1993-94 to 1994-95 Change
Adams	67	52	-15
Brooks	16	16	0
Cattell	68	57	-11
Douglas	64	69	+5
Edmunds	28	35	+7
Findley	70	74	+4
Garton	40	35	-5
Granger	76	67	-9
Greenwood	97	97	0
Hanawalt	97	99	+2
Hillis	74	74	0
Howe	38	56	+18
Hubbell	84	94	+10
Jackson	64	75	+11
Jefferson	93	94	+1
Longfellow	14	24	+10
Lovejoy	66	71	+5
Lucas	18	23	+5
Madison	46	39	-7
Mann	NA	54	NA
Mc Kee	42	35	-7
Mc Kinley	12	25	+13
Mitchell	52	54	+2
Monroe	95	83	-12
Moore	85	83	-2
Moulton	15	20	+5
Oak Park	48	36	-12
Park Avenue	63	67	+4
Perkins	66	65	-1
Phillips	68	80	+12
Pleasant Hill	83	77	-6
Stowe	52	59	+7
Studebaker	68	59	-9
Wallace	25	18	-7
Watrous	44	34	-10
Willard	42	29	-13
Windsor	77	84	+7
Woodlawn	63	82	+19
Wright	60	68	+8
DISTRICT	63	63	0

Table B4. ITBS Percentile Rank Trends
Grade 6 (1993-94) To Grade 7 (1994-95)
National School Norms

SCHOOL	Grade 6 1993-94 Core Total	Grade 7 1994-95 Core Total	1993-94 to 1994-95 Change
Brody	68	68	0
Callanan	80	79	-1
Goodrell	50	52	+2
Harding	36	44	+8
Hiatt	46	39	-7
Hoyt	40	44	+4
McCombs	54	63	+9
Meredith	61	60	-1
Merrill	77	78	+1
Weeks	70	69	-1
DISTRICT	61	62	+1

Table B5. Percent of Students Scoring on Grade Level (50th Percentile) or Higher
Grade 3 (1993-94) to Grade 4 (1994-95) ITBS Elementary School Trends

School	Grade 3 1993-94 Percent ≥ Grade Level	Grade 3 1993-94 Number Complete	Grade 3 1993-94 Number Enrolled	Grade 3 1993-94 Percent Complete	Grade 4 1994-95 Percent ≥ Grade Level	Grade 4 1994-95 Number Complete	Grade 4 1994-95 Number Enrolled	Grade 4 1994-95 Percent Complete
Adams	60.4	48	51	94.1%	52.0	50	54	92.6%
Brooks	20.5	44	57	77.2%	13.3	45	61	73.8%
Cattell	64.0	50	68	73.5%	50.9	55	64	85.9%
Douglas	60.3	68	73	93.2%	54.7	64	69	92.8%
Edmunds	29.7	64	72	88.9%	37.7	53	66	80.3%
Findley	63.6	55	63	87.3%	69.8	43	62	69.4%
Garton	43.9	41	48	85.4%	38.5	39	44	88.6%
Granger	73.1	52	66	78.8%	63.8	58	67	86.6%
Greenwood	82.4	74	82	90.2%	79.7	79	83	95.2%
Hanawalt	87.0	46	58	79.3%	93.3	45	57	78.9%
Hillis	65.2	66	75	88.0%	66.7	63	75	84.0%
Howe	42.4	59	62	95.2%	53.4	58	59	98.3%
Hubbell	63.9	61	63	96.8%	79.4	63	66	95.5%
Jackson	67.2	58	71	81.7%	66.7	60	67	89.6%
Jefferson	78.2	78	79	98.7%	73.0	74	75	98.7%
Longfellow	21.4	42	49	85.7%	28.6	35	40	87.5%
Lovejoy	64.9	37	53	69.8%	68.3	41	57	71.9%
Lucas	25.0	48	57	84.2%	31.1	45	58	77.6%
Madison	47.1	34	43	79.1%	38.2	34	48	70.8%
Mann	NA	0	42	NA	55.9	34	36	94.4%
Mc Kee	51.9	54	63	85.7%	42.0	50	56	89.3%
Mc Kinley	17.8	45	49	91.8%	30.2	43	51	84.3%
Mitchell	54.8	42	42	100.0%	53.5	43	50	86.0%
Monroe	80.0	85	95	89.5%	65.8	79	91	86.8%
Moore	67.8	59	75	78.7%	72.5	51	66	77.3%
Moulton	23.1	39	58	67.2%	24.4	45	69	65.2%
Oak Park	44.8	67	70	95.7%	42.6	54	59	91.5%
Park Avenue	60.7	89	106	84.0%	64.2	81	104	77.9%
Perkins	54.0	113	116	97.4%	51.0	100	110	90.9%
Phillips	60.0	50	54	92.6%	67.9	53	53	100.0%
Pleasant Hill	73.2	41	44	93.2%	69.4	36	43	83.7%
Stowe	40.7	54	65	83.1%	46.7	45	59	76.3%
Studebaker	56.9	72	81	88.9%	51.5	66	68	97.1%
Wallace	33.3	45	55	81.8%	21.7	46	57	80.7%
Watrous	47.5	40	47	85.1%	39.1	46	55	83.6%
Willard	30.5	59	70	84.3%	28.3	53	68	77.9%
Windsor	66.2	65	72	90.3%	72.4	58	67	86.6%
Woodlawn	61.8	68	93	73.1%	69.4	72	77	93.5%
Wright	53.5	43	51	84.3%	60.4	48	55	87.3%
DISTRICT	55.4	2155	2536	85.0%	55.3	2107	2466	85.4%

NOTES: Number & Percent Complete refers to the number and percent of students completing the test to get a Core Total score. Low percentages may result from building totals that include special populations who are not tested, in addition to students who are absent for one or more of the subtests.

Table B6. Percent of Students Scoring on Grade Level (50th Percentile) or Higher
Grade 6 (1993-94) to Grade 7 (1994-95) ITBS Middle School Trends

School	Grade 6 1993-94 Percent ≥ Grade Level	Grade 6 1993-94 Number Complete	Grade 6 1993-94 Number Enrolled	Grade 6 1993-94 Percent Complete	Grade 7 1994-95 Percent ≥ Grade Level	Grade 7 1994-95 Number Complete	Grade 7 1994-95 Number Enrolled	Grade 7 1994-95 Percent Complete
Brody	57.7	220	244	90.2%	61.8	225	247	91.1%
Callanan	67.2	232	279	83.2%	66.2	216	259	83.4%
Goodrell	52.3	197	228	86.4%	54.6	185	214	86.4%
Harding	44.4	205	283	72.4%	50.3	181	273	66.3%
Hiatt	49.3	148	196	75.5%	41.7	144	186	77.4%
Hoyt	44.7	170	211	80.6%	45.3	139	171	81.3%
Mc Combs	49.7	169	189	89.4%	58.3	151	182	83.0%
Meredith	54.2	236	257	91.8%	51.7	240	264	90.9%
Merrill	63.1	168	191	88.0%	65.6	157	180	87.2%
Weeks	63.8	174	226	77.0%	59.5	173	230	75.2%
DISTRICT	55.0	1919	2304	83.3%	56.0	1811	2206	82.1%

NOTES: Number & Percent Complete refers to the number and percent of students completing the test to get a Core Total score. Low percentages may result from building totals that include special populations who are not tested, in addition to students who are absent for one or more of the subtests.

District Criterion-Referenced, Objectives-Based Tests:
Historical Disaggregated Data

The tables in this appendix (and in Appendix D) show:

1) The percent of students in a category that scored at or above the district criterion of 70% on the end-of-course test, and
2) The total number of students in a category that took the test.

Example: Elementary Mathematics: Math 2 Total:

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 2 Total	83.8	83.5	84.2	87.1	69.5	73.4	90.9
1991-1992	2377	1179	1198	1941	436	954	1422

On this test,
83.8% of all 2,377 second grade students tested scored a 70% or better.
83.5% of 1,179 second grade females scored a 70% or better.
84.2% of 1,198 second grade males scored a 70% or better.
87.1% of 1,941 second grade non-minority students scored a 70% or better.
69.5% of 436 second grade minority students scored a 70% or better.
73.4% of 954 second grade students receiving free or reduced price meals scored a 70% or better.
90.9% of 1,422 second grade students not receiving free or reduced price meals scored a 70% or better.

The following tests were given at the end of each semester:
All Home Economics tests
World History (S1 and S2; different tests)
Economics (S1 and S2; different forms)
English 10

All reading tests for elementary students were given at the time that a student completed a particular book in the series. Results represent a each student's final end-of-book test for the year (unduplicated count). All reading tests for middle school were administered at the end of the school year. If students progress at an appropriate pace, they should be able to complete Level 5 during Grade 1, Levels 6 and 7 during Grade 2, Levels 8 and 9 during Grade 3, and Levels 10 through fourteen in Grades 4 through 8 (one level each year).

Science tests are now modular, such that the test for a module is given at the end of instruction, rather than a comprehensive test at the end of the year. This is done for elementary and middle school science, biology, chemistry, and physics.

The remaining tests were administered at the end of the school year:
All Mathematics (elementary) tests consist of two parts: a section on Core Concepts and Computation, and a section on Problem Solving. The Math Total score is the sum of scores on both sections.
Middle School Reading
Middle School Social Science (Grade 6 & 8)
All Language Arts (except Grade 10)
All French & Spanish

Appendix C

Table C1. Reading: Elementary

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
A New Day Level 5	89.7	89.9	89.3	90.1	87.4	84.8	92.3
1991-1992	1537	805	732	298	239	545	991
A New Day Level 5	91.9	93.2	90.6	93.1	86.2	87.2	94.9
1992-1993	1492	737	755	1231	261	579	913
A New Day Level 5	90.0	90.5	89.6	90.2	89.4	82.3	94.4
1993-1994	1295	681	614	1068	227	469	826
A New Day Level 5	86.8	88.4	85.3	89.5	77.4	80.7	91.2
1994-1995	1409	689	720	1090	319	592	817
Garden Gates Level 6	76.5	78.8	74.4	76.2	77.1	68.9	82.9
1991-1992	620	288	332	463	157	286	334
Garden Gates Level 6	78.7	78.1	79.2	80.2	74.7	76.4	82.1
1992-1993	577	270	307	419	158	343	234
Garden Gates Level 6	77.1	71.8	81.1	81.0	65.1	74.5	80.3
1993-1994	528	227	301	399	129	290	238
Garden Gates Level 6	78.9	79.7	78.3	82.4	69.6	75.7	83.8
1994-1995	551	261	290	403	148	329	222
Going Places Level 7	93.4	94.2	92.5	94.7	87.3	89.1	95.8
1991-1992	1634	829	805	1350	284	599	1033
Going Places Level 7	95.3	95.5	95.2	96.2	91.2	93.2	96.7
1992-1993	1651	866	785	1378	273	628	1023
Going Places Level 7	95.3	96.1	94.6	96.3	90.9	92.2	97.4
1993-1994	1740	890	850	1423	317	689	1051
Going Places Level 7	93.7	94.5	92.8	94.8	89.6	89.8	96.5
1994-1995	1420	763	657	1122	298	591	829

Table C1. Reading: Elementary (continued)

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Castles of Sand Level 8	75.1	77.7	72.9	78.3	65.4	70.8	78.7
1991-1992	714	327	387	535	179	332	381
Castles of Sand Level 8	73.4	75.2	72.0	72.6	76.0	71.5	75.8
1992-1993	504	218	286	379	125	277	227
Castles of Sand Level 8	71.4	76.6	67.5	73.9	64.5	68.2	75.9
1993-1994	405	171	234	295	110	239	166
Castles of Sand Level 8	73.9	74.5	73.4	76.5	67.3	69.8	80.5
1994-1995	528	231	297	378	150	328	200
On the Horizon Level 9	90.3	91.2	89.4	91.7	83.4	85.3	93.2
1991-1992	1761	885	876	1466	295	631	1127
On the Horizon Level 9	89.9	91.6	88.2	91.4	82.7	84.2	93.2
1992-1993	1745	867	878	1438	307	652	1093
On the Horizon Level 9	88.8	90.4	87.0	90.7	79.6	83.2	92.2
1993-1994	1701	883	818	1402	299	641	1060
On the Horizon Level 9	88.9	89.4	88.5	91.3	78.5	83.8	92.2
1994-1995	1872	959	913	1523	349	729	1143

Table C1. Reading: Elementary (continued)

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Silver Secrets Level 10	84	84.5	83.6	85.1	78.8	75.4	88.9
1991-1992	1765	894	871	1468	297	629	1131
Silver Secrets Level 10	84.1	85.2	83.1	87.0	71.8	73.8	90.5
1992-1993	1853	918	935	1502	351	706	1147
Silver Secrets Level 10	87.2	88.0	86.4	88.9	79.8	80.3	91.5
1993-1994	1822	920	902	1475	347	701	1121
Silver Secrets Level 10	85.1	88.0	82.2	87.2	76.6	78.5	89.3
1994-1995	1734	875	859	1397	337	671	1063
Dream Chasers Level 11	85.5	87.3	83.5	87.4	75.1	79	88.6
1991-1992	1507	774	733	1274	233	482	1023
Dream Chasers Level 11	88.7	90.5	86.7	90.6	79.5	83.2	91.7
1992-1993	1618	853	765	1340	278	570	1048
Dream Chasers Level 11	86.4	86.0	86.9	88.7	74.7	79.0	90.4
1993-1994	1547	794	753	1294	253	544	1003
Dream Chasers Level 11	87.2	86.8	87.6	89.0	79.0	77.3	92.1
1994-1995	1471	756	715	1199	272	493	978

Table C2. Reading: Middle School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Wind by the Sea Level 12	66.1	70.1	61.7	71.5	43.3	48.4	74.3
1991-1992	1642	850	792	1328	314	519	1123
Wind by the Sea Level 12	75.6	76.7	74.5	78.9	61.0	61.2	84.0
1992-1993	1952	983	969	1590	362	720	1232
Wind by the Sea Level 12	75.6	79.5	71.4	79.0	61.5	63.0	83.0
1993-1994	1964	1014	950	1574	390	732	1232
Wind by the Sea Level 12	76.1	78.1	74.1	79.6	62.1	62.6	84.9
1994-1995	1996	1012	984	1595	401	789	1207
Star Walk Level 13	59.3	63.4	55.2	63.2	41.2	40.5	66.7
1991-1992	1435	718	717	1180	255	407	1028
Star Walk Level 13	74.4	77.7	70.9	77.3	62.7	59.2	82.1
1992-1993	2029	1051	978	1630	399	679	1350
Star Walk Level 13	73.2	75.2	71.2	77.0	56.9	56.4	81.7
1993-1994	1864	930	934	1507	357	626	1238
Star Walk Level 13	73.8	76.9	70.3	79.5	53.1	61.7	81.0
1994-1995	1839	978	861	1442	397	686	1153
Worlds Beyond Level 14	50.7	56.5	45.2	52.8	43.3	40.3	54.9
1991-1992	647	317	330	506	141	186	461
Worlds Beyond Level 14	52.0	57.9	45.3	54.8	40.3	37.4	59.2
1992-1993	1006	534	472	810	196	334	672
Worlds Beyond Level 14	51.0	56.0	45.7	54.4	39.5	38.2	59.6
1993-1994	531	277	254	412	119	212	319
Worlds Beyond Level 14	51.6	50.1	53.1	57.1	37.5	36.9	61.6
1994-1995	744	377	367	536	208	301	443

BEST COPY AVAILABLE

Table C3. Mathematics: Elementary

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 2 Total 1991-1992	83.8	83.5	84.2	87.1	69.5	73.4	90.9
	2377	1179	1198	1941	436	954	1422
Math 2 Total 1992-1993	85.2	85.0	85.3	88.9	70.8	76.6	92.1
	2513	1217	1296	1989	524	1130	1383
Math 2 Total 1993-1994	84.1	82.8	85.2	87.2	71.1	74.2	91.7
	2464	1199	1265	1976	488	1083	1381
Math 2 Total 1994-1995	84.0	84.0	84.1	87.7	71.5	75.0	92.3
	2322	1159	1163	1793	529	1108	1214
Math 2 Core 1991-1992	91.2	90.9	91.5	92.7	84.6	84.7	95.6
	2377	1179	1198	1941	436	954	1422
Math 2 Core 1992-1993	91.6	91.8	91.4	93.2	85.5	86.5	95.8
	2514	1218	1296	1990	524	1131	1383
Math 2 Core 1993-1994	89.4	89.0	89.8	91.3	81.8	83.6	94.0
	2464	1199	1265	1976	488	1083	1381
Math 2 Core 1994-1995	89.5	89.1	89.9	91.9	81.7	84.1	94.5
	2322	1159	1163	1793	529	1108	1214
Math 2 Problem Solving 1991-1992	67.8	65.6	69.9	71.8	50	52.4	78.1
	2377	1179	1198	1941	436	954	1422
Math 2 Problem Solving 1992-1993	70.3	70.3	70.4	75.0	52.7	57.4	80.8
	2513	1217	1296	1989	524	1130	1383
Math 2 Problem Solving 1993-1994	69.9	68.1	71.5	73.5	55.1	58.6	78.7
	2465	1200	1265	1977	488	1083	1382
Math 2 Problem Solving 1994-1995	70.8	70.6	71.0	76.1	52.8	60.1	80.5
	2319	1158	1161	1791	528	1106	1213

Table C3. Mathematics: Elementary (continued)

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 3 Total 1991-1992	74.9	75.4	74.5	78	61.7	62.6	83.3
	2360	1138	1222	1919	441	953	1405
Math 3 Total 1992-1993	78.5	78.6	78.3	81.4	66.5	68.1	86.4
	2316	1147	1169	1856	460	1005	1311
Math 3 Total 1993-1994	76.2	78.0	74.6	80.4	61.4	66.3	84.0
	2362	1143	1219	1844	518	1041	1321
Math 3 Total 1994-1995	75.4	76.5	74.3	79.3	61.4	64.9	84.2
	2289	1130	1159	1789	500	1008	1237
Math 3 Core 1991-1992	75.3	75.7	74.9	77.4	66.1	64.2	83
	2381	1152	1229	1932	449	971	1408
Math 3 Core 1992-1993	77.3	78.4	76.1	80.0	66.2	66.1	85.9
	2326	1149	1177	1864	462	1011	1315
Math 3 Core 1993-1994	75.1	76.8	73.5	78.5	62.9	64.8	83.2
	2363	1143	1220	1845	518	1041	1322
Math 3 Core 1994-1995	74.3	75.8	72.8	78.1	60.4	64.6	82.2
	2328	1147	1181	1826	502	1029	1255
Math 3 Problem Solving 1991-1992	70.1	69.1	71.1	73.7	54.8	58.2	78.3
	2358	1136	1222	1918	440	952	1404
Math 3 Problem Solving 1992-1993	73.7	71.1	76.4	77.6	58.0	61.7	83.0
	2316	1147	1169	1856	460	1005	1311
Math 3 Problem Solving 1993-1994	71.8	72.3	71.4	76.0	56.9	61.6	79.9
	2362	1143	1219	1844	518	1041	1321
Math 3 Prob Solving 1994-1995	73.7	72.6	74.7	77.9	58.6	62.7	82.8
	2284	1129	1155	1786	498	1005	1236

Table C3. Mathematics: Elementary (continued)

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 4 Total 1991-1992	59.6	59.6	59.6	64.2	40.6	45	68.2
	2223	1093	1130	1789	434	826	1396
Math 4 Total 1992-1993	63.3	62.1	64.4	68.0	43.4	48.6	74.0
	2241	1076	1165	1810	431	947	1294
Math 4 Total 1993-1994	62.4	61.0	63.8	66.4	46.6	47.5	73.0
	2180	1093	1087	1742	438	902	1278
Math 4 Total 1994-1995	60.5	61.6	59.4	65.5	43.7	48.6	70.4
	2235	1094	1141	1718	517	1017	1218
Math 4 Core 1991-1992	52	52.2	51.7	55.8	35.9	37.4	60.5
	2223	1093	1130	1789	434	826	1396
Math 4 Core 1992-1993	57.2	56.9	57.4	61.1	40.7	44.5	66.4
	2295	1105	1190	1850	445	970	1325
Math 4 Core 1993-1994	55.8	55.5	56.1	59.6	40.9	41.6	65.8
	2183	1095	1088	1743	440	904	1279
Math 4 Core 1994-1995	54.4	56.8	52.1	58.4	41.0	43.4	63.5
	2235	1094	1141	1718	517	1017	1218
Math 4 Problem Solving 1991-1992	66.6	66.6	66.6	71.2	47.9	54.6	73.7
	2223	1093	1130	1789	434	826	1396
Math 4 Problem Solving 1992-1993	68.7	67.1	70.2	73.3	49.2	55.7	78.2
	2243	1077	1166	1812	431	949	1294
Math 4 Problem Solving 1993-1994	68.3	67.2	69.4	73.1	49.3	54.9	77.8
	2180	1093	1087	1742	438	902	1278
Math 4 Prob Solving 1994-1995	66.8	66.8	66.8	71.9	49.9	55.6	76.1
	2229	1092	1137	1714	515	1014	1215

Table C3. Mathematics: Elementary (continued)

Math 5 Total 1991-1992	55	53.5	56.6	59	37.5	39	64.8
	2126	1070	1056	1734	392	803	1323
Math 5 Total 1992-1993	62.0	62.0	62.0	66.6	44.0	48.2	71.1
	2196	1102	1094	1744	452	875	1321
Math 5 Total 1993-1994	55.7	54.6	56.9	58.9	43.4	41.8	66.1
	2169	1065	1104	1729	440	922	1247
Math 5 Total 1994-1995	60.1	58.7	61.5	63.8	46.5	44.0	71.6
	2095	1048	1047	1643	452	871	1224
Math 5 Core 1991-1992	50.8	49.7	51.9	54.1	36.4	36.1	59.7
	2128	1071	1057	1735	393	804	1324
Math 5 Core 1992-1993	57.6	56.7	58.6	61.4	43.1	44.1	66.6
	2198	1103	1095	1746	452	877	1321
Math 5 Core 1993-1994	50.5	50.7	50.3	53.0	40.7	38.9	59.1
	2170	1065	1105	1730	440	922	1248
Math 5 Core 1994-1995	54.7	54.1	55.2	57.8	43.4	39.0	65.8
	2095	1048	1047	1643	452	871	1224
Math 5 Problem Solving 1991-1992	65.2	62.8	67.5	70	44.5	49.7	74.6
	2171	1090	1081	1764	407	819	1352
Math 5 Problem Solving 1992-1993	70.9	71.5	70.2	76.1	50.7	59.2	78.6
	2196	1102	1094	1744	452	875	1321
Math 5 Problem Solving 1993-1994	65.9	63.8	67.8	69.9	50.2	51.8	76.3
	2169	1065	1104	1729	440	922	1247
Math 5 Prob Solving 1994-1995	69.1	66.9	71.4	73.2	54.0	56.0	78.4
	2089	1047	1042	1641	448	866	1223

Table C4. Mathematics: Middle School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Pre-Algebra 1993-1994	54.4	53.3	55.6	56.5	42.5	41.7	57.7
	706	368	338	600	106	144	562
Pre-Algebra 1994-1995	63.6	61.5	65.9	64.2	59.8	56.0	65.4
	698	361	337	601	97	134	564
Math 6 Prob Solving 1994-1995	58.6	57.8	59.3	63.6	39.9	44.1	68.5
	1549	792	757	1218	331	632	917
Math 7 Prob Solving 1994-1995	41.0	39.9	42.2	47.0	22.1	29.6	48.6
	1652	863	789	1254	398	662	990
Math 8 Prob Solving 1994-1995	27.8	22.6	32.9	30.4	20.1	22.0	31.9
	886	442	444	657	229	368	518
Algebra I 1994-1995	71.8	70.2	73.2	72.1	68.4	60.7	73.1
	277	124	153	258	19	28	249

Table C5. Mathematics: High School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Introductory Mathematics 1993-1994	17.6 431	15.2 184	19.4 247	22.6 287	7.6 144	10.4 163	22.0 268
Introductory Math 1994-1995	24.0 387	17.2 174	29.6 213	27.0 270	17.1 117	20.9 153	26.1 234
Introductory Algebra 1991-1992	37 611	34.3 315	39.9 296	36.8 478	37.6 133	39.9 138	36.2 473
Introductory Algebra 1992-1993	37.6 548	37.1 272	38.0 276	39.4 429	31.1 119	34.1 170	39.2 378
Introductory Algebra 1993-1994	42.9 140	38.4 73	47.8 67	42.3 123	47.1 17	45.2 31	42.2 109
Introductory Algebra 1994-1995	47.6 191	48.5 97	46.8 94	47.0 166	52.0 25	43.3 60	49.6 131
Algebra I 1994-1995	33.7 945	31.6 534	36.3 411	34.6 761	29.9 184	30.8 201	34.4 744

Table C6. Language Arts: Elementary School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Language Arts 4 1994-1995	57.2	62.4	52.1	62.9	37.6	42.6	69.1
	2244	1107	1137	1736	508	1009	1235

Table C7. Language Arts: Middle School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Language Arts Grade 6 1991-1992	62.8	66.4	58.8	66.9	44.3	45.0	71.9
	2025	1061	964	1657	368	685	1340
Language Arts Grade 6 1992-1993	66.9	69.2	64.6	69.7	53.8	51.1	75.9
	2006	1016	990	1662	344	724	1282
Language Arts Grade 6 1993-1994	65.1	69.8	60.1	69.2	48.3	50.6	73.5
	1935	1000	935	1554	381	709	1226
Language Arts Grade 6 1994-1995	68.3	69.7	66.9	72.9	50.0	54.3	76.8
	1817	927	890	1449	368	690	1127
Language Arts Grade 7 1991-1992	54.9	62.7	46.8	57.8	41.3	37.2	62.3
	1825	932	893	1508	317	540	1285
Language Arts Grade 7 1992-1993	56.1	60.9	51.0	59.9	39.9	38.5	64.7
	1941	1004	937	1570	371	636	1305
Language Arts Grade 7 1993-1994	58.3	63.0	53.6	62.1	41.8	38.8	68.1
	1881	940	941	1529	352	632	1249
Language Arts Grade 7 1994-1995	61.8	67.4	55.3	67.4	41.6	45.5	71.2
	1838	988	850	1441	397	672	1166
Language Arts Grade 8 1991-1992	56.4	63.1	49.8	59.0	43.8	41.7	62.1
	1846	915	931	1529	317	516	1330
Language Arts Grade 8 1992-1993	59.1	64.6	53.3	61.6	47.2	41.5	66.2
	1815	922	893	1499	316	525	1290
Language Arts Grade 8 1993-1994	62.1	68.1	55.5	66.1	46.5	42.8	70.7
	1908	997	911	1519	389	587	1321
Language Arts Grade 8 1994-1995	67.1	70.4	63.7	70.7	52.1	51.7	73.9
	1743	876	867	1403	340	538	1205

Table C8. English: High School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
English 9 1993-1994	72.0	76.3	67.5	76.9	53.4	56.3	77.1
	1705	870	835	1349	356	414	1291
English 9 1994-1995	74.7	79.3	69.7	80.0	55.4	56.1	81.2
	1759	913	846	1382	377	456	1303
English 10 1991-1992	65.4	68.3	62.6	67.7	54.9	56.4	67.2
	1516	738	778	1243	273	259	1257
English 10 1992-1993	68.7	72.8	64.4	70.5	59.8	59.9	70.6
	1350	688	662	1121	229	247	1103
English 10 1993-1994	68.4	73.3	63.4	71.4	56.2	54.6	71.5
	1526	775	751	1229	297	280	1246
English 10 1994-1995	70.6	74.1	67.0	73.8	57.4	55.9	74.5
	1517	775	742	1219	298	315	1202

Table C9. Foreign Language: Middle School

Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced
MS French 1993-1994	46.4	53.3	36.1	45.6	50.0	36.0	48.4
	153	92	61	125	28	25	128
MS French 1994-1995	54.5	61.3	45.8	53.2	62.5	52.2	55.2
	110	62	48	94	16	23	87
MS Spanish 1993-1994	46.5	54.1	37.0	47.1	44.3	45.2	47.0
	372	207	165	293	79	93	279
MS Spanish 1994-1995	45.6	47.2	43.7	44.9	48.4	43.5	46.4
	318	176	142	254	64	85	233

Table C10. Foreign Language: High School

Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced
HS French 1993-1994	61.8	68.2	51.5	63.4	54.8	39.4	67.1
	173	107	66	142	31	33	140
HS French 1994-1995	70.5	71.5	68.8	74.2	57.8	53.7	74.8
	200	123	77	155	45	41	159
HS Spanish 1993-1994	49.2	52.9	44.3	51.6	38.2	41.4	51.0
	612	350	262	502	110	116	496
HS Spanish 1994-1995	53.5	53.4	53.7	55.9	44.4	47.9	54.8
	654	371	283	521	133	119	535

Table C11. Science: Elementary School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Sci 3 Structures of Life 1994-1995	75.6	76.6	74.6	79.2	61.2	69.4	80.9
	1617	798	819	1290	327	744	873
Sci 3 Measurement 1994-1995	70.1	67.9	72.2	73.8	55.3	60.4	77.4
	1847	898	949	1478	369	793	1054
Sci 3 Earth Materials 1994-1995	62.9	64.2	61.6	66.1	50.3	59.9	65.3
	1790	880	910	1426	364	785	1005
Sci 4 Pillbug & Pond Life 1994-1995	83.8	83.6	83.9	86.2	74.3	77.5	88.8
	1720	836	884	1366	354	764	956
Sci 4 Water 1994-1995	81.2	81.2	81.3	85.7	65.1	75.9	85.4
	1914	930	984	1499	415	838	1076
Sci 4 Electricity 1994-1995	67.7	66.8	68.5	71.8	52.2	58.1	74.9
	1936	942	994	1530	406	836	1100
Sci 5 Landforms 1994-1995	68.7	66.1	71.2	71.7	56.3	58.1	76.0
	1571	763	808	1267	304	645	926
Sci 5 Powders & Crystals 1994-1995	81.4	81.9	80.9	84.1	70.3	73.5	86.6
	1725	855	870	1392	333	688	1037
Sci 5 Levers & Pulleys 1994-1995	68.4	64.8	71.9	71.4	56.9	60.6	73.8
	1579	785	794	1252	327	645	934

Table C12. Science: Middle School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Science 6 1992-1993	29.1	25.3	32.7	32.6	13.3	16.5	36.2
	1964	961	1003	1603	361	714	1250
Science 6 1993-1994	29.6	28.9	30.3	33.7	16.1	15.5	37.7
	1552	800	752	1191	361	569	983
Science 6 1994-1995	29.5	24.8	34.4	32.5	16.6	14.1	38.4
	1549	791	758	1260	289	566	983
Science 7 1992-1993	41.4	38.2	44.8	44.4	29.2	25.3	49.0
	1905	995	910	1522	383	616	1289
Science 7 1993-1994	43.4	39.6	47.1	48.1	25.9	24.4	53.1
	1670	835	835	1311	359	566	1104
Science 7 1994-1995	44.2	43.9	44.5	49.2	25.3	30.0	51.6
	1596	843	753	1260	336	550	1046
Science 8 1991-1992	33.5	29.7	37.4	36.5	20.4	19	39.6
	1718	865	853	1404	314	506	1212
Science 8 1992-1993	35.1	31.3	39.0	38.0	21.8	19.5	41.4
	1665	855	810	1367	298	481	1184
Science 8 1993-1994	38.1	34.7	41.8	42.3	23.1	25.9	43.8
	1555	807	748	1217	338	494	1061
Science 8 1994-1995	38.5	34.2	42.7	44.4	15.5	24.4	44.5
	1297	649	648	1032	265	390	907
Central Acad. Earth Science 1993-1994	23.7	16.4	32.3	24.8	16.7	12.5	24.4
	135	73	62	117	18	8	127
Central Acad. Earth Science 1994-1995	28.8	26.2	31.7	31.3	7.7	7.1	31.5
	125	65	60	112	13	14	111

Table C13. Science: High School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Earth Science 1991-1992	11.9	7.4	16.5	13.3	5.9	6.9	13.2
	1048	527	521	860	188	216	832
Earth Science 1992-1993	10.9	6.8	15.0	12.3	5.0	7.7	11.7
	1096	555	541	878	218	233	863
Earth Science 1993-1994	18.9	14.9	23.3	19.4	17.2	15.0	20.1
	1168	605	563	918	250	267	901
Earth Science 1994-1995	17.4	14.6	20.4	18.9	12.4	12.0	19.2
	1198	625	573	916	282	301	897

Table C14. Social Science: Middle School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Central Acad. Government 1993-1994	89.4	82.4	96.9	90.9	81.8	71.4	91.5
	66	34	32	55	11	7	59
Central Acad. Government 1994-1995	86.0	84.1	88.1	86.2	84.6	75.0	87.1
	136	69	67	123	13	12	124

Table C15. Social Science: High School

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Government 1993-1994	63.7	61.7	65.6	66.7	52.3	46.8	66.7
	535	256	279	426	109	79	456
Government 1994-1995	63.1	59.4	67.2	68.0	42.4	45.4	66.1
	1283	668	615	1040	243	185	1098
Economics Form A 1992-1993	48.0	46.3	49.4	50.7	27.5	27.8	49.1
	342	164	178	302	40	18	324
Economics Form A 1993-1994	46.6	37.7	54.9	48.5	34.1	31.3	47.4
	337	162	175	293	44	16	321
Economics Form A 1994-1995	46.2	42.2	50.5	46.9	41.2	35.1	47.3
	392	204	188	341	51	37	355
Economics Form B 1992-1993	30.4	24.9	36.2	32.5	14.9	25.0	31.0
	404	205	199	357	47	36	368
Economics Form B 1993-1994	26.9	21.9	32.2	28.7	18.9	19.5	27.8
	412	210	202	338	74	41	371
Economics Form B 1994-1995	31.0	28.0	34.2	34.9	8.2	17.8	32.6
	413	211	202	352	61	45	368

Table C16. High School Family & Consumer Sciences

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Food & Nutrition	24.1	24.1	24.1	25.1	21	19.4	26.4
1991-1992	328	212	116	247	81	108	220
Food & Nutrition	14.4	18.4	7.5	16.9	7.1	8.6	17.1
1992-1993	327	207	120	243	84	105	222
Food & Nutrition	18.5	21.9	12.9	21.1	10.2	12.0	21.3
1993-1994	411	256	155	313	98	125	286
Food & Nutrition	25.3	29.8	17.4	28.9	15.2	19.7	28.7
1994-1995	399	255	144	294	105	152	247
Child Development	63.2	64.9	50.0	67.9	48.3	52.5	67.5
1992-1993	495	439	56	377	118	141	354
Child Development	60.7	63.5	26.7	66.3	36.1	43.4	67.7
1993-1994	392	362	30	320	72	113	279
Child Development	67.7	70.1	45.5	74.7	49.6	57.3	71.9
1994-1995	465	421	44	336	129	131	334
Personal Development	53.0	57.9	40.4	56.2	46.2	47.1	56.0
1993-1994	202	145	57	137	65	68	134
Personal Development	44.7	50.0	25.0	48.5	33.3	37.3	49.4
1994-1995	132	104	28	99	33	51	81
Parenting 1992-1993	61.8	65.2	30.0	63.1	55.6	52.6	100.0
	102	92	10	84	18	19	53
Parenting 1993-1994	57.5	60.7	35.3	60.6	44.0	41.4	61.9
	134	117	17	109	25	29	105
Parenting 1994-1995	61.7	66.2	30.0	68.7	28.6	22.2	73.0
	81	71	10	67	14	18	63

Appendix D

Table D1. 1994-1995 Elementary Social Science Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Soc Sci 3	63.9 2095	60.8 1047	66.9 1048	68.4 1653	46.8 442	NA	NA
Soc Sci 4	72.3 2060	74.5 1015	70.1 1045	78.2 1596	51.9 464	NA	NA
Soc Sci 5	50.4 1777	47.3 897	53.5 880	53.8 1423	36.7 354	NA	NA

Table D2. 1994-1995 Middle & High School Mathematics Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 6 Core Revised	35.0 532	37.3 279	32.4 253	42.4 363	18.9 169	19.7 239	47.4 293
Math 7 Core Revised	26.0 592	28.4 306	23.4 286	28.0 404	21.8 188	17.2 273	33.5 319
Math 8 Core Revised	9.5 328	5.0 161	13.8 167	12.7 228	2.0 100	8.5 142	10.2 186
Geometry	38.4 952	36.1 545	41.5 407	39.0 803	35.6 149		
Algebra II	23.3 600	20.1 313	26.8 287	21.9 475	28.8 125	29.8 84	22.3 516

Table D3. 1994-1995 High School Science Modular Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Biology M1: Introduction to Biology	81.0 1397	81.9 739	80.1 658	85.0 1102	66.1 295	67.6 256	84.0 1141
Biology M2: Chemistry of Biology	46.6 1375	47.5 722	45.6 653	49.7 1085	35.2 290	36.5 241	48.8 1134
Biology M3: Cytology	51.1 1308	49.9 700	52.5 608	54.0 1042	39.5 266	38.7 222	53.6 1086
Biology M4: Genetics	31.9 1277	31.5 679	32.4 598	35.6 1015	17.9 262	20.9 215	34.2 1062
Biology M5: Evolution	58.5 1235	56.1 660	61.2 575	61.6 991	45.9 244	43.5 200	61.4 1035
Biology M6: Kingdoms	33.9 1209	32.6 662	35.5 547	36.4 962	24.3 247	20.1 204	36.7 1005
Biology M7: Human Systems	64.2 1206	65.2 655	63.0 551	68.6 956	47.2 250	51.5 206	66.8 1000
Biology M8: Ecology	57.4 1243	55.7 663	59.3 580	61.7 986	40.9 257	41.4 215	60.7 1028
Chemistry M1-M3	40.5 692	35.7 373	46.1 319	43.9 563	25.6 129	27.0 74	42.1 618
Chemistry M4-M6	27.0 682	23.4 367	31.1 315	29.3 559	16.3 123	15.7 70	28.3 612
Physics S1	51.1 360	38.5 182	64.0 178	52.5 301	44.1 59	46.2 39	51.7 321
Physics: Light	29.3 300	20.9 158	38.7 142	31.1 254	19.6 46	39.1 23	28.5 277
Physics: Heat	49.0 298	42.0 157	56.7 141	52.0 254	31.8 44	47.8 23	49.1 275
Physics: Electricity	29.3 300	23.9 159	35.5 141	29.5 254	28.3 46	25.0 24	29.7 276

Table D4. 1994-1995 High School Social Science Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
World History S1	50.6	51.5	49.6	53.5	39.8	34.9	56.1
	1483	765	718	1164	319	387	1096
World History S2	45.8	41.8	50.1	48.5	35.2	33.6	49.6
	1483	766	717	1182	301	351	1132
American History S2	50.4	48.5	52.5	50.9	47.5	50.0	50.5
	252	130	122	212	40	40	212

Table D5. 1994-1995 High School Sewing Technology Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Sewing Technology	15.4	16.0	0.0	20.0	0.0	18.8	10.0
	26	25	1	20	6	16	10

1995-96 Test Development Plans

Development of criterion-referenced tests will continue throughout 1995-96 for the following areas:

Vocational Education (academics)
Sewing Technology
Food & Nutrition

Chemistry: 6 modules
Science 6, 7, 8: Modular tests to be piloted during 1995-96.
Biology: 7 Modules
Physics: 5 Modules

Algebra II
Geometry
Elementary & Middle School Mathematics

Social Science 3, 4, 5
Social Science 6, 7, 8
American History Semester 1
American History Semester 2
World History Semester 1
World History Semester 2

Reading: Silver-Burdett-Ginn Levels 5, 6, & 7
English 7 & 8